SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1933

No. 203

P. F. PETERSEN BAKING COMPANY, SCHULZE BAKING COMPANY, CONTINENTAL BAKING COMPANY, ET AL., APPELLANTS,

vs.

CHARLES W. BRYAN, AS GOVERNOR OF THE STATE OF NEBRASKA, AND DWIGHT F. FELTON, AS DEPUTY SECRETARY OF THE DEPARTMENT OF AGRICULTURE OF THE STATE OF NEBRASKA

APPEAL FROM THE SUPREME COURT OF THE STATE OF NEBRASKA

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JUDD & DETWEILER (INC.), PRINTERS, WASHINGTON, D. C., NOVEMBER 8, 1933

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[fols. a & 1 & 2] [Captions omitted]

[fol. 3] (Original petition omitted.)

IN DISTRICT COURT OF LANCASTER COUNTY, STATE OF NEBRASKA

P. F. Petersen Baking Company, Schulze Baking Company, Continental Baking Company, General Baking Company, Quaker Baking Company, Corporations, for Themselves and Others Similarly Situated, Plaintiffs,

vs.

Charles W. Bryan, as Governor of the State of Nebraska, and Dwight F. Felton, as Deputy Secretary of the Department of Agriculture of the State of Nebraska, Defendants

Temporary Restraining Order—Filed July 22, 1931

This cause coming on to be heard upon plaintiff's petition, duly verified, and the application therein for an injunction to restrain the enforcement of the provisions of the Act of the Legislature of Nebraska for 1931, known as House Roll 51, and of the rules promulgated by the Deputy [fol. 4] Secretary of Agriculture thereunder.

Now therefore, the hearing for a temporary injunction is set in the District Court room of Lancaster County at the Court House in Lincoln, Lancaster County, Nebraska, on the 21st day of September, 1931, at 10:00 A. M., or as soon thereafter as council can be heard, and of which hearing the notice required by law shall be given to the defendants and each of them, and to the Attorney General, and the court being of the opinion that great and irreparable injury will be suffered by the plaintiffs in that they will be subject to arrest and fine and their property will be taken for violation of the provisions of said act and the rules above referred to, all of which it is alleged by plaintiffs are unconstitutional and void, therefore a temporary restraining order is hereby granted to the plaintiffs, restraining the defendants and each of them, their agents and employees and

all persons claiming to act under their authority, direction or control, from in any way enforcing the provisions of the said House Roll 51 or the rules promulgated thereunder, this order to be in effect only upon the giving of bond by plaintiffs in the sum of $1,000.00, condition as required by law, and this order to remain in force until the hearing and determination of the application for a temporary injunction upon notice as aforesaid.

Dated this 23rd day of July, 1931, at Lincoln, Nebraska.

Fred Shepherd, Judge of District Court.

[File endorsement omitted.]

[fols. 5 & 6] Bond on restraining order for $1,000.00, approved and filed July 22, 1931, omitted in printing.

[fol. 7] IN DISTRICT COURT OF LANCASTER COUNTY

[Title omitted]

NOTICE OF FILING AMENDED PETITION—Filed Sept. 5, 1931

To Honorable C. A. Sorensen, Attorney General, attorney for defendants herein:

You are hereby notified that the plaintiffs herein have filed in the office of the Clerk of this Court, Lincoln, Lancaster County, Nebraska, an amended petition, a copy of which amended petition is herewith delivered to you.

John C. Grover, Harold D. LeMar, Attorneys for Plaintiffs.

[fol. 8] Due service of the within notice of filing amended petition, together with a copy of said amended petition, is hereby acknowledged at Omaha, Douglas County, Nebraska, this 5th day of September, 1931.

C. A. Sorenson, Attorney General, Attorney for Defendants, by R. R. Strehlow, Assistant Attorney General.

[File endorsement omitted.]

IN DISTRICT COURT OF LANCASTER COUNTY

[Title omitted]

AMENDED PETITION—Filed Sept. 5, 1931

Plaintiffs, and each of them, for cause of action against the defendants, and each of them, state:

1

That the plaintiff, P. F. Petersen Baking Company, is a corporation, organized under the laws of the State of Ne- [fol. 9] braska and is a citizen and resident thereof, maintaining offices at Omaha in said state; that plaintiff Schulze Baking Company of Omaha, Nebraska, is a corporation organized under the laws of the State of Illinois and that it is a citizen and resident of said state; that the plaintiff Continental Baking Company, Omaha, Nebraska, is a corporation organized under the laws of Delaware and is a citizen and resident of said state; that the General Baking Company, Omaha, Nebraska, is a corporation organized under the laws of the State of New York, and is a citizen and resident thereof; that the plaintiff Quaker Baking Company, Council Bluffs, Iowa, is a corporation organized under the laws of the State of Maine and is a citizen and resident thereof; that each of the foregoing named corporations are engaged, at the locations stated, in the wholesale baking and distribution of bread in the State of Nebraska, with the exception of the Quaker Baking Company, which is engaged in wholesale baking of bread in Council Bluffs, Iowa, and the distribution of a part thereof in the State of Nebraska.

2

That this action is brought for the purpose of having declared invalid and unconstitutional the law known as House Roll 51, passed by the Legislature of Nebraska in 1931, and being an amendment to Sections 89-142, 89-143, 89-144 and 89-145, Compiled Statutes of Nebraska, 1929, known as the Nebraska Bread Law, which fixes standard weights, and which unless enjoined will become effective August 2nd, 1931, and which the defendant, Charles W. Bryan threatens to make operative July 22nd, 1931; that

there are many bakers of bread and dealers therein throughout the State of Nebraska in addition to plaintiffs, who are affected by the Nebraska Bread Law, and whose personal liberty will — wrongfully and unlawfully invaded and whose property will be taken without due process of law, and who will be denied the equal protection of the law by [fol. 10] the enforcement of such Nebraska Bread Law; that the question- involved are those common and of general interest throughout the State, not only to all the bread bakers and bread dealers but to all the bread consumers in such state, as the quality of the bread will be effected by the enforcement of the law; that all such so effected by and interested in the law are so numerous that it is impractical to bring them all before the court and therefore plaintiffs bring this action for themselves and each of them, and also for all others similarly situated.

3

That the defendant Charles W. Bryan is the duly elected, qualified and acting Governor of the State of Nebraska and by virtue of his office is charged with the duty of executing and administering the laws of the State of Nebraska and of supervising and directing the work of the Department of Agriculture, and is aided therein under the law by the defendant, Dwight F. Felton, who is the duly appointed, qualified and acting Deputy Secretary of the Department of Agriculture of the State of Nebraska, there being no secretary appointed; that the said defendants, pursuant to the duties of their respective offices, will unless enjoined by the court, enforce the provisions of the Nebraska Bread Law, and because of the inability of plaintiffs to comply with such law, said defendants will thus subject plaintiffs to arrest and will impose on plaintiffs and others similarly situated restrictions which are unreasonable and arbitrary and in violation of the 14th Amendment to the United States Constitution, and Section III of Article 1, and Section 25 of Article I and Section I Article III, Constitution of Nebraska, with consequent loss to plaintiffs and others similarly situated, of their liberty and property in viola- [fol. 11] tion of their rights, and further violates the 6th Amendment to the United States Constitution, and Article I Section XI, and Article II Section I of the Constitution of Nebraska, as hereinafter related.

4

That the plaintiff, P. F. Petersen Baking Company, has a paid up capital stock of $200,000.00, that it commenced business in 1891, and sells its products in the State of Nebraska and other states surrounding, that its present output of bread exceeds ten million loaves annually with a value of about $1,000,000.00; that the plaintiff Schulze Baking Company has a paid up capital stock in excess of $1,000,000.00, commenced business in 1906, and that its present output of bread is over seven million, with a value of about $500,000; that the Continental Baking Company has a paid up capital stock of more than $1,000,000.00 and with its predecessors in their branch at Omaha has been doing business since 1913. That the annual output of such Omaha plant is about 10,000,000 loaves of bread with a value of about $1,000,000.00; that the plaintiff General Baking Company has a paid up capital stock in excess of $1,000,000.00, and with its predecessors in the branch at Omaha has been doing business since about 1925, has an annual output of about 3,000,000 loaves, with a value of about $250,000.00; that the plaintiff Quaker Baking Company has a paid up capital stock of $134,000.00 and with its predecessor has been doing business since 1905, that its annual output is about 3,000,000 loaves of bread, with a value of about $250,000.00, and that the other plaintiffs are doing business on a commensurately large scale, and that the principle business of all the plaintiff bakers is that of baking bread; that all such plaintiff bakers have sufficient equipment and plant for the supply of the present orders of patrons and for the baking and selling respectively of the requisite quality and size of loaves of bread demanded by the consuming public, and in which various business- the said plaintiffs have [fol. 12] built up a profitable trade, but which trade will be largely lost if the maximum provisions of the Nebraska Bread Law be enforced and such business- will thereby be irreparably injured and damaged in more than $50,000.00.

5

That the Legislature of Nebraska in 1921 enacted a standard weight bread law, which is found in Sections 7612 to 7615 Compiled Statutes of Nebraska for 1922, wherein standard weights for loaves of bread to apply during twenty-four hours after baking were fixed with a tolerance

of two ounces per pound over such standard weight, and that the United States Supreme Court held in 264 U. S. 504 that such excess tolerance provision of two ounces to the pound loaf of bread subjected the bakers and sellers of bread to restrictions which are unreasonable and arbitrary and are repugnent to the 14th Amendment to the United States Constitution; that thereupon the Legislature of Nebraska 1927 amended sections 7613 and 7614 of the said Compiled Statutes of Nebraska for 1922 by passing an amendment which provided for three and one-half ounces excess tolerance to the pound of bread, and which also provided for one ounce under the specified weights to the pound on individual loaves, which amendment was duly approved by the Governor, and that the United States District Court for the District of Nebraska, Lincoln Division, in a case in which the P. F. Petersen Baking Company, et al., was plaintiff and Arthur Weaver, Governor, et al., was defendant, being designated number 261, Equity, held the said Amendment to be arbitrary and unreasonable and invalid under the provisions of the 14th Amendment to the Constitution of the United States.

6

That thereupon in 1931 the Legislature of Nebraska amended said sections by passing House Roll Number 51, a copy of which is hereto attached, marked exhibit "A", and by reference made a part hereof, and which said amend-
[fol. 13] ment provides that every loaf of bread made for sale in the State of Nebraska shall be of the following weights avoirdupois: one-half pound, one pound, one and one-half pounds, and also in exact multiples of one pound and of no other weights, and providing that none of the provisions of the said act shall apply to fancy bread and further provides that the Secretary of Agriculture shall be empowered to prescribe reasonable tolerances or variations in excess, but not under the weights mentioned within which all loaves shall be baked and also the time for which said weight shall be maintained, and further provides that violation thereof shall be punished by a fine of not less than $10.00 and not more than $100.00. That under and by virtue of the said House Roll 51, duly passed by the Nebraska Legislature and approved by the Governor on the 21st day of April, 1931, the Deputy Secretary of Ag-

riculture has adopted and approved rules and regulations for the observance of the plaintiffs and all others similarly situated, a copy of which rules and regulations are hereto attached, marked exhibit "B", and by reference made a part thereof, and which said regulations among other things provide that the excess tolerances permitted shall be one ounce per one half pound, two ounces per pound, and 10% upon all larger loaves of bread shall be allowed in excess of the minimum weights, which said tolerances shall apply for a period of twelve hours after baking. That unless restrained by suitable order of this court the said House Roll 51 will become effective on or about the 2nd day of August, 1931, and the Department of Agriculture will attempt to enforce provisions of the said rules and regulations adopted by the Deputy Secretary of Agriculture in an attempt to define and enforce the said House Roll 51.

7

That for many years the most popular loaf with the consuming public in the State of Nebraska and in the surrounding states have been loaves retailing at 8¢, or two loaves for 15¢, 10¢ per loaf, and 13¢ per loaf or two loaves for [fol. 14] 25¢; that the weights thereof and of all other loaves made by the bakers have for years fluctuated in accordance with the market price of the ingredients contained in such loaves, that is, when the price of ingredients advanced the weights of the loaves have been correspondingly decreased and when the price of ingredients was lowered the weights of the loaves have been correspondingly increased, the quality of such loaves remaining the same at all time-; that the minimum weight of such loaves sold to the consuming public is printed upon the wrapper of all wrapped bread so that the purchaser of the loaf is advised of the weight of the loaf which he is purchasing and paying for.

8

That no dissatisfaction has ever been expressed by the bread buying public in the State of Nebraska with the arrangement and plan indicated, the public demand being almost wholly for a high quality of bread rather than for any given weight or size of loaf, and that the demand of the standard and high quality of bread has been satisfied

by the bakers under the arrangement and plan aforesaid of making the weight and size of the loaf correspond with the fluctuation of the price of the ingredients used in making such bread; and that there has never been and is not now any demand by the bread consuming public for a fixed weight of loaf of bread or for any particular*ly* or stated size in preference to the quality of the loaf, which is the principal consideration.

9

That there is no standard quality of bread under any existing law, nor will there be under the provisions and terms of the amended bread law, as it is not possible from the nature of bread to standardize its quality; that poor bread is composed of few or many ingredients according to the judgment of the individual baker and the demands of his consumers, that some of such ingredients are flour, water, [fol. 15] salt, yeast, sugar, malt, shortening, milk and all of which tho- pure vary in their richness or strength with a consequent wide variation in the richness or quality of bread baked therefrom, though all of such various qualities of ingredients and resulting bread are pure and wholesome and in accordance with the requirements of the Pure Food Law. That the use of various ingredients containing varying quantities of richness and food value, effects materially the alteration or variation in weights of loaves of bread; that among the things contributing to produce unavoidable and uncontrollable variation in the weights of loaves of bread during the after baking are (a) the water content of the wheat, the flour, dough and the bread, which water content varies and is beyond the control of the baker; (b) the gluten content of the flour in which a rich gluten content requires a greater proportion of water than does a lesser quantity of gluten, resulting in greater consequent evaporation of moisture in the better gluten quality in a given period; (c) exact weights and measurements of dough before entering the oven cannot be attained under known existing processes, and during the process of mixing, dividing, rounding and *and* baking, certain uncontrol-able losses occur; (d) losses in weight while the dough is being fixed, during fermentation, during preparation, while the bread is in the oven, after baking and before wrapping, after wrapping and before sale, which losses vary and cannot be avoided or controlled.

10

That the flour used in making bread requires the addition of from 54 to 65 percent of its weight in moisture in order that it may be made into dough suitable for baking, the amount added to the said flour being based upon the quality of the flour and the condition of storage thereof. That during the baking process this moisture content is reduced by evaporation to from 25 to 38 percent which evaporation depends largely upon the quality of the ingredients used, the temperature and humidity of the bakery and of the oven, the temperature and humidity of the at- [fol. 16] mosphere after baking wherein the bread may be kept, and other uncontrollable elements; that owing to the fermentation which takes place in the dough after it is mixed and before it is inserted in the oven it is necessary in order to obtain the best results, to place such dough in the ovens at a given stage of the fermentation, which must be done regardless of the temperature of the oven at such time; that the particular stage of fermentation above referred to is variable in time depending upon the character and quality of the ingredients used and the prevailing conditions of temperature and humidity at the time. That it is not possible to maintain a uniform heat in all parts of the *ownes* and in all ovens during the time that the loaves of bread are being inserted therein and during the baking process, with a consequent variation in moisture content of the dough and of the bread. That this evaporation, which variations depending upon heat, humidity and other uncontrollable elements, continues so long as moisture remains in the loaf, or until equalized with the surrounding air.

11

That the modern bakery uses one or more of two general types of ovens, one of which is described as a traveling oven, and the other type of which is known as the peel oven. That in general the traveling oven is best described as a traveling tunnel from eight to twelve feet in width and from thirty-five to one hundred and twenty feet in length, in which the loaves of dough are inserted at one end of the oven, traveling slowly throughout the length of the oven and being discharged at the other end thereof as baked loaves; that during the said traveling process the said

loaves pass thru several baking compartments in which they are subjected to varying degrees of temperature and humidity, which are not readily controllable, but which the baker attempts to off-set by varying the speed of travel of [fol. 17] the loaves of bread; that under present conditions it is not possible to so accurately control the heat, humidity and speed of travel of the said loaves of bread that all will be subjected to the same amount of evaporation and that as a consequence various loaves being submitted to varying degrees *to* heat, humidity and speed of travel, result in baked loaves of varying weights depending upon such varying evaporation. That the other type of oven known as the peel oven is one having a capacity of a large number of loaves at one time in which there is one opening in the oven thru which the dough is inserted and thru which same opening the baked loaves of bread are withdrawn, this process being termed loading and unloading the oven; that only four to six loaves either of dough or bread can be handled at one operation, those first loaded into the oven being shoved to the rear thereof and the last being inserted are placed in the front of the oven, and which loading process requires from three to ten minutes, depending upon the amount of loaves to be loaded, the speed of the operator and the conditions under which operated; that after baking, the loaves in the front oven are unloaded first, the unloading process taking place from the forward end of oven to the rear, with the result that the loaves first loaded into the oven are the last loaves to be unloaded, this unloading process also requiring from three to ten minutes, with the result that the loaves in the rear of the oven are subjected to the intense heat of the oven running in the neighborhood of 400° Fahrenheit, for a period of time varying from six to twenty minutes longer than the loaves in the front of the oven, resulting in greater evaporation in the loaves in the back of the oven than those in the front, with consequent variation in weight of the loaves at the end of the baking process even though the said loaves were all the same weight when inserted in the oven.

12

That in the process of the manufacture of bread in large bakeries such as those of the plaintiffs, the scaling or [fol. 18] weighing of the dough is done by a machine known

as a scaling machine, in which machine the dough is by volume compressed into a compartment, variable in size, which compartment is adjustable to provide the required amount of dough for a desired size loaf. That this process constitutes scaling by volume rather than by actual weight of the dough, and that this is the only practical method known for scaling dough in large quantities for plants having a large production, and that owing to the nature of the process of scaling variation in the amount of dough scaled for given loaves will result from the amount of gas present in the dough and with numerous other elements, resulting in a variation in the amount of dough placed in the pan; that in order to obtain a loaf of bread weighing not less than one pound at any time within 12 hours after baking, it is necessary to insert into the oven a sufficient quantity of dough in order that allowances for losses in the dividing and moulding process and for evaporation losses in the baking, cooling and wrapping process may not reduce that loaf below the minimum weight during said period, and it becomes necessary to scale a sufficient amount of dough which will frequently result in a loaf of bread exceeding the two ounce tolerance above said one pound weight; that owing to the constant variation in the time taken for the evaporation of the moisture in both the dough and bread; and in order to allow for the constant variation in the amount of evaporation taking place, it is necessary to scale such a quantity of dough as will, after making due allowances for the greatest evaporation possible, result in a loaf of bread weighing at least one pound continuously for a period of twelve hours after baking; that owing to additions to the dough resulting from the use of dusting flour, pan grease, and to pieces of dough dislodging from one loaf and attaching themselves to the next loaf, it is necessary for the baker to scale a quantity of dough as near the one pound unit as is possible in order that the same may not exceed in weight the excess tolerance allowed by said rules.

[fol. 19] 13

That despite the best efforts of the baker it is impossible to so regulate the mechanical scaling, evaporation and other invisable losses to the extent that his loaf will never drop below the minimum weight fixed by statute without scaling

such an amount of dough that additions in weight to the loaf, such as dusting flour, pan grease and dislodged pieces of dough, may frequently so add to the weight of the loaf that upon completion of the baking process it will exceed the maximum tolerance permitted by the rules of the Department of Agriculture. That in order to insure that the baked loaf will under all conditions of heat, humidity and exposure weigh the minimum weight fixed by law for the required period, the baker must scale such an amount of dough as will immediately after baking or in humid weather, frequently exceed the maximum tolerance weight fixed by rule of the Deputy Secretary of Agriculture. That under the modern and present day processes of bread making adopted by bakers, it is absolutely impossible to pre-determine the quantity of dough which must be scaled to produce loaves of bread which will under any and all varying conditions of heat, moisture, humidity and air and the other uncontrollable factors, weigh not less than the minimum fixed by law nor more than the maximum fixed by rule during the specified period therein.

14

That though the amount of moisture evaporation and the consequent shrinkage in the various loaves of bread will vary widely under different and varying atmospheric conditions, the food value of the loaf baked from the same formula and ingredients remain the same so that loaf of bread baked from pieces of dough scaled the same amount will contain the same food value although weighing different amounts upon completion of the baking process or within a period of twelve hours thereafter, and that as a result [fol. 20] thereof, although the purchaser may obtain a loaf of bread varying in weight from another loaf of the same specified weight, the loaf purchased contains equal food value with the other loaf.

15

That under the plan and arrangement of graduating the weight of the loaf in accordance with the fluctuaction of the market price of ingredients as now practiced by plaintiff bakers and others, the quality of bread has been preserved and the buying public has at all times shared ratably in the increase or decrease in the market price of ingredients without any deterioration in the quality of the bread

consumed; that under the Nebraska Bread Law, should the cost of the ingredients used in the loaf of bread increase by a fraction of a cent per loaf, the price to the consumer, if the quality thereof is to be maintained, will of necessity be raised a full cent, since the cent is the lowest unit of money in circulation and in that event the retailer and the baker will make more than a normal profit and the consuming public will pay more for its bread than it is now paying and more than it should pay after making due allowance for the usual margin of profit in the production of bread, which margins ordinarily do not exceed six-tenths of a cent per loaf for the baker, and in this manner the Nebraska Bread Law, if put into effect, will be detrimental to and against the best interest of the consuming public and will in no way or manner be beneficial to that public.

16

That under the modern baking process one barrel of flour weighing 196 pounds produces approximately three hundred loaves of bread weighing one pound each, so that because the minimum unit of money is one cent it will necessarily be impossible to give the bread consuming public the benefit of a reduction in price of flour unless the cost of such flour to the baker is reduced $3.00 per barrel, and thus [fol. 21] the Nebraska Bread Law will to such extent, if upheld, again in its operation and effect be contrary to the interest of the bread consuming public.

17

That because the price for bread becomes by usage and custom largely standardized and stabilized according to size, bakers of bread will, if the Nebraska Bread Law becomes effective, in order to comply with such standardized and stabilized sizes obviously be obliged to lower the quality of the bread upon an increase in the price of ingredients in order to maintain the usual margin of profit, and once again such Nebraska Bread Law will in its operation, if upheld, be detrimental to and against the interest of the bread consuming public, hence the vital interest of that public in the defeat of such law.

18

That the majority of the plaintiff bakers are engaged in the wholesale baking of bread on a large scale and that such

plaintiffs supply approximately one-third or more of the total quantity of bakers bread consumed in the state of Nebraska; that in all such large bakeries the process of bread baking is more or less continuous all of the time except during one day in the week, which is set apart for cleaning and renovating purposes in each bakery, and that therefore because of the exactions of the business and the lack of continuous and constant transportation facilities, it is not possible to make immediate delivery of bread as it is baked to retail dealers throughout the state, and the products of such larger bakers usually do not leave the bakery until six to twelve hours after the bread is wrapped; that during this period of time large quantities of baked bread are displayed and kept in the bakery. That under the rules adopted by the Department of Agriculture the tolerances provided for loaves of bread shall apply for a period of twelve hours after baking and shall be determined by averaging the [fol. 22] weight of not less than five loaves of a given and specified weight and manufacture, if available, and there is no provision made in said rules as to the place where the weighing shall be made. That after the loaves of bread have been discharged from the oven in all bakeries of the plaintiffs herein and of others similarly situated, the bread is permitted to cool for a period of time varying from two to four hours before wrapping in order that the gases may be permitted to escape and the loaf become sufficiently solidified that it will not be injured in the wrapping machine process, and that the rules of the Secretary of Agriculture, which provide for the application of tolerances for a period of twelve hours after baking, fails to define or disclose at what period of the process the baking is completed, whether it is at the time of discharge from the oven, at the time of completion of the cooling process, or at the time of completion of the wrapping thereof; and that during the time that the loaves of bread are still retained in the bakeries of the plaintiffs and others similarly situated, they are intermingled with all of the other loaves of the same size and manufacture so that it is impossible for the baker himself, for inspectors of the Department of Agriculture, or for any other person, to determine at what hour the baking of such loaf or loaves was completed, and that when inspectors of the Department of Agriculture attempt to average the weight of five loaves of bread of a given size and manu-

facture, it is impossible even though said weighing process takes place in the plant, for the baker himself to determine whether all of the five loaves have been baked within the preceding twelve hours or whether a portion of said loaves are older. That under the rules of the Department of Agriculture this weighing process by the Department of Agriculture may take place after delivery of the loaves of bread to the retail dealer and that from the size, appearance, shape or feeling of the loaf of bread it is impossible for the [fol. 23] inspector or any other person to determine whether the loaves at that time weighed are more or less than twelve hours of age, even if it were fully determined as to when the baking process was completed and when the period of time covered by said rules commenced to run.

19

That in practically every city, town and village in the State of Nebraska there are retail bakers who bake small amounts of bread from two to four times per day, according to the demand of the consumers in their immediate vicinity, and who sell their bread over the counter direct to the local consumer almost immediately after baking so that such retail bakers' bread is not kept on hand subject to the weighing process for a period of more than three hours after baking and such bread is thus not subject to so much evaporation as the bread of the larger wholesale bakers, and in the plant of the said small retail baker the loaf may be protected by the baker himself from evaporation, whereas the loaf of the wholesale baker, passing as it does from the hands of the wholesaler to those of the retail grocer, may be subjected to the weighing process after the time when it passes from the control of the baker himself into the hands of the retail grocer who is under the statute not subject to penalties for violation thereof and who may permit the said loaves to be displayed in places and under conditions where evaporation is greatly increased, thereby causing the baker to be guilty of a violation of the act in question; that as a result thereof the operation of the statute in question is not equal among the citizens of the state.

20

That the hundreds of restaurants throughout the State of Nebraska are large purchasers of bread, and such restau-

rants have found from experience that the most satisfactory [fol. 24] loaf for them to purchase and which they demand for their trade, is a loaf of a width, height and thickness which will fit mechanical toasters, manufactured for restaurant use, and none of which are known to these plaintiffs to be manufactured in the State of Nebraska or to be constructed in sizes and shapes which will under all circumstances fit the sizes of loaves permitted under the statute in question. That as a result of this condition the majority of restaurants take a loaf of bread very long and thin in shape because such loaf is more economical than the ordinary loaf, having fewer ends and crusts, and is capable of being cut into a larger number of slices without being awkward to handle and which loaves of bread frequently weigh in the neighborhood of twenty-eight or twenty-nine ounces, and wherein evaporation is more rapid. That to require the bakers of bread in Nebraska, and particularly the plaintiffs herein, many of whom enjoy a very satisfactory restaurant trade, to construct their loaves of a given weight rather than to permit them to construct it of a size and shape demanded by the restaurant keeper and fit the mechanical appliances of the restaurant keeper, will result in the bakers losing the restaurant business and the restaurant keeper establishing equipment for the manufacture of his own bread in the size desired, or will require the restaurant keeper to purchase bread manufactured in bakeries outside the State of Nebraska.

21

That in order to attempt to comply with the provisions of the Nebraska Bread Law by the plaintiff bakers, it will require a radical change in the equipment of the bakeries and in the methods and processes now used in baking bread, which change in equipment, methods and processes will entail costs and expenses to each baker running into thousands of dollars, varying in accordance with the capacity and size of the bakery, and aggregating for plaintiffs more than $10,000.00, all of which cost and expense will be of no benefit to either the baker, the dealer or the consuming public, [fol. 25] and there will also be an irreparable loss to plaintiffs of many thousands of dollars in under weight and over weight bread, which will result from the enforcement of the

law, which bread will be illegal under the law and not subject to sale and will result in great economic loss.

That for a period of a great many years one of the most popular loaves manufactured in the State of Nebraska on account of its size, shape and price, is the loaf of bread weighing approximately twenty ounces, wholesaling at 8¢ and retailing at 10¢, which loaf of bread is in particular demand by the consuming public in rural communities owing possibly to the size of families and the demand for wholesome bread at a price figuring in even coin units; that as a result thereof fully thirty three and one-third per cent of the white bread manufactured by the plaintiffs herein is a loaf of bread weighing approximately twenty ounces, which loaf is not permitted to be manufactured by the 1931 Nebraska Bread Law. That in no line of manufacturing business in the State of Nebraska is there greater competition than for the baker, to whom every retail baker and every housewife are active or potential competitors; that to refuse to the bakers of Nebraska the right to manufacture the twenty ounce loaf of bread, popular as it is with the consuming public and embracing approximately one-third of the total white bread production, will result in a large number of housewives resuming home baking, with the consequent loss of a large and undeterminable proportion of the business of the plaintiffs herein, and others similarly situated, and will render useless the large present investment of the plaintiffs and others in pans and wrapping paper for said twenty ounce loaf.

23

That under the provisions of the 1931 Nebraska Bread Law the provisions of the act do not apply to fancy breads, while both the statute and the rules of the Department of [fol. 26] Agriculture fail to define or determine what shall constitute fancy bread, whether the same applies to dark breads, nut breads, raisin bread, hearth breads, or whether its application refers to white breads manufactured with whole milk or other wholesome ingredients; that for that reason the statute is so indefinite that the plaintiff bakers and others similarly situated are unable to determine whether their bread will come within the classification of

fancy bread and thereby be relieved from the provisions of the statute, or whether they will be classified as not manufacturing fancy bread and therefore subject to the provision of the statute.

24

That a new development has taken place in the baking industry within the past three years wherein the bakers are manufacturing, offering to their trade and selling a loaf of bread which is sliced before wrapping and is thereby made more readily usable by the housewife; that the demand for the sliced bread has grown to such large proportion during this short period of time that a large percentage of certain sizes of bread manufactured and sold by the bakers of Nebraska is now sliced. That owing to the slicing process and to the wrapping of this sliced bread, greater areas of the bread itself are exposed to evaporation with consequent greater evaporation in sliced bread than in unsliced bread, thereby resulting in greater and more rapid loss of weight in the sliced loaf; that the rules of the Department make no exception for sliced bread and allow no different tolerance for sliced bread than for the unsliced loaf. That for the reasons above stated it becomes more nearly impossible to maintain a sliced loaf of bread within the limits of tolerance fixed by the rule of the Department of Agriculture than for any other loaf, and that by the enforcement of the rules so laid down by the Department of Agriculture the bakers will be practically prohibited from manufacturing and selling a sliced loaf of bread, which is in itself a [fol. 27] wholesome product and an added convenience greatly in demand by the consuming public.

25

That it is the custom of large bakeries such as those operated by the plaintiffs herein, that bread is placed in the store of retail grocers, permitted to remain there for a period of time approximately forty-eight hours and if unsold at the end of that time to return the same day to the baker, thereafter selling the same as stale bread at a reduced price, and which stale return frequently attain- large proportions; that this bread, though having lost part of its palatability thru loss of moisture contained in the loaf

originally, still contains all of the food value that it had at the time it came from the oven, and is still a wholesome food for the human system, much in demand by certain institutions and by poor and needy families; that during the period of forty-eight hours or longer during which the loaf of bread is permitted to remain in the hands of the retail grocer under the varying conditions of heat and humidity and the methods of display for such merchandise in the grocery store, varying degrees of loss of evaporation will result, so that many loaves will have lost sufficient moisture that their weight will be below the minimum fixed by statute and above the tolerance weight fixed for the next smaller sized loaf and therefore will not be permitted to be sold under the provisions of the 1931 Nebraska Bread Law, thereby resulting in great economic loss to the bakers and great hardship to poor families regularly purchasing the said stale bread at the present time at reduced prices.

26

That said House Roll 51 as adopted is in violation of Section 14 of Article III of the Constitution of Nebraska in that the title of said act fails to state clearly the subject [fol. 28] matter of the bill, the subject matter as stated in the title thereto has reference to the adoption of a standard loaf of bread for the State of Nebraska and to provide a penalty for the violation thereof and to repeal the sections in the 1929 Compiled Statutes containing the previous Bread Weight Law. That in fact the act itself contains a grant of power to the Department of Agriculture and a grant to the Secretary of Agriculture of Legislative authority to adopt rules establishing numerous loaves of bread as standard, to fix tolerances and to provide length of time within which loaves must maintain the specified weight, and that the said act further provides not for a standard loaf of bread as stated in the title of the act, but for loaves of one-half pound size, one pound size, one and one-half pound size, and other loaves in multiples of one pound and by implication provides for twin loaf of bread and for fancy breads, all of which are not embraced within the title of the act.

27

That the Nebraska Bread Law as adopted in House Roll 51 is contrary — and in violation of Section I Article III of

the Constitution of the State of Nebraska, which provides that "the Legislative authority of the state shall be vested in a Legislature consisting of a Senate and House of Representatives", in that the said Nebraska Bread Weight Law fails to define an offense but attempts to pass to a ministerial officer of the executive department legislative authority to define the offense of selling over weight or short weight bread, and to provide rules for the enforcement of the act having the authority of law.

28

That the Nebraska Bread Law above referred to is contrary to and in violation of the Constitution of the State of Nebraska as above referred to in the further particular [fol. 29] that the legislative authority above referred to is delegated to the Secretary of Agriculture, an office which is not filled, the office now being in charge of the Deputy Secretary of Agriculture, Dwight F. Felton, defendant herein. That under the delegation of power above referred to to make rules, no power is granted to this Deputy Secretary of Agriculture, to the Governor, or to any other person or official, but is attempted to be delegated to the Secretary of Agriculture only. That under the attempted delegation of legislature authority the Deputy Secretary of Agriculture has adopted and attempted to make official certain rules which are shown by exhibit "B" hereto attached, all of which said rules are adopted under the alleged authority of said statute but of which rules those numbered one to eight inclusive, rule ten, rules twelve, thirteen and fourteen are without any authority whatever of said statute; that rule nine is surplusage, the same being stated in the statute itself; that rule eleven is arbitrary, unfair and unreasonable in that it fails to define what shall constitute fancy bread, but leaves the power of definition entirely in the hands of the Secretary of Agriculture without apprizing these plaintiffs or others similarly situated of what shall constitute fancy bread; that rule fifteen is arbitrary and unjust in that it provides for weighing of a small number of loaves only, which loaves if available are to be of a given lot of the same marking and manufacture; that rule sixteen is arbitrary, unfair and unreasonable in that it fixes a tolerance of one ounce one the one-half pound loaf,

two ounces on the pound loaf, and 10% on all larger loaves of bread, which said tolerance is arbitrary, unreasonable and so small that under the operation of natural laws the bakers are unable to comply with the same under the conditions of heat and humidity prevailing in Nebraska, and is further unfair in that whereas on the one pound loaf of bread a tolerance of two ounces is permitted, on the one [fol. 30] and one-half pound loaf, in which evaporation is greater and consequent loss of weight is larger, a tolerance of only 2.4 ounces is permitted, and on the two pound loaf a tolerance of only 3.2 ounces is permitted, and on three pound loaves a tolerance of only 4.8 ounces is permitted. And the said rules are further unreasonable and arbitrary in that rule seventeeen makes tolerances applicable for a period of twelve hours after baking without defining completion of the baking process, or specifying when, where or how the weighing shall be completed, and in the further particular that the period of time during which the said bread is required to remain within the tolerances fixed is unfair and unreasonable, and in that no provision is made for the disposition of any bread not falling within the specified tolerances, or older than the time of weighing even though within said tolerances.

29

That the said Nebraska Bread Law is contrary to and in violation of Section I of the 14th Amendment to the Constitution of the United States, which provides "no state shall make or enforce any law which shall * * * deny to any person within its jurisdiction the equal protection of the laws", and it further violates Section I of the 14th Amendment to the Constitution of the United States, and Section 25 of Article I of the Constitution of the State of Nebraska, which provides that there shall be no discrimination between citizens of the United States in respect to the acquisition, ownership, possession, enjoyment or de-cent of property in that it provides that "every loaf of bread made for sale in the State of Nebraska" shall be of the specified weights, thereby under one construction thereof it attempts to regulate the operations of bakers situated outside the State of Nebraska engaged in interstate commerce and shipping bread into the state, or under the other

construction thereof requiring bakeries situated within the State of Nebraska to comply with the requirements of said [fol. 31] Bread Weight Law and permitting bakeries situated outside the State of Nebraska to have privileges as to weights and tolerances not permitted to the bakers of Nebraska, thereby placing the bakers of Nebraska at a disadvantage and irreparably damaging their business.

30

That the Nebraska Bread Law is contrary to and in violation of Section I of the 14th Amendment to the Constitution of the United States, which provides "no state shall make or enforce any law which shall * * * deprive any person of life, liberty or property without due process of law; nor deny to any person within its jurisdiction the equal protection of the law", and it also violates Section III of Article I of the Constitution of the State of Nebraska, which provides "no person*a* shall be deprived of life, liberty or property without due process of law" for such Nebraska Bread Law will, if enforced, deprive the plaintiffs and each of them and others similarly situated, of their liberty and their property without due process of law and such bread law also denies to the citizens of the State of Nebraska the equal protection of the law and their constitutional freedom of contract; that such Nebraska Bread Law is not passed under any proper exercise of the police power of the State of Nebraska and that such law has no relation whatever to the public wel-are or the public health, but is contrary and adverse thereto; and such law if enforced is arbitrary, unreasonable and oppressive and is an unwarranted interference with the constitutional rights and privileges of plaintiffs and each of them and of all others similarly situated, all done under the guise of police protection.

31

That plaintiff and each of them and all others similarly situated have no adequate remedy at law in the premises; that the enforcement of the Nebraska Bread Law as amended by the Legislature in 1931 will entail a multiplicity of suits and consequent large expense to the plaintiffs and [fol. 32] other litiga-tes; that if the enforcement of said law be not enjoined, plaintiffs and each of them and all others similarly situated, will sustain immeasureable dam-

age and irreparable injury to their business and property in that on and after August 2nd, 1931, when the amended law will go into effect, unless its enforcement be enjoined, plaintiffs and others similarly situated will not only be subject to arrest and fine because of their inability to comply with the provisions of the law or of the rules adopted thereunder, but this will entail consequent loss of liberty and property; and the larger bakers who manufacture and sell the greatest quantity of bakers bread consumed in the State of Nebraska will be unable to dispose of their products because of not conforming to the requirements of the bread law for the abnormal period provided for weighing and this while the validity of the law is still undetermined, and therefore plaintiffs and each of them and those in like situation will thereby have diverted and will lose their regular trade and custom and the good will of their business and trade so built up over a period of years of development and by large expenditures of money, and valuable property will thus be permanently impaired and lost. Plaintiffs therefore appeal to a Court of Equity to enjoin the threatened wrongful invasion by the defendants of the rights and liberty and of property and of contract of the plaintiffs and all other similarly situated.

Wherefore plaintiffs and each of them pray:

First. That the court order and decree that the provision of House Roll 51, passed by the Legislature of the State of Nebraska in 1931, amending the Nebraska Bread Law, is unconstitutional and invalid, and that all defendants and each of them, their agents and employees and all persons claiming to act under their authority, direction or control, or that of either of them be permanently enjoined [fols. 33–35] from in any way enforcing said law.

Second. That pending final hearing the court issue temporary injunction, and that pending hearing thereon the court issue temporary restraining order, restraining defendants and each of them, their agents and employees, and all persons claiming to act under their authority, direction or control, or of either of them, from in any way enforcing the provisions of the Nebraska Bread Law as amended.

Third. That plaintiffs and each of them may have such other and further relief in the premises as may to the court seem just and equitable.

Fourth. And for the costs and disbursements of this action.

John C. Grover, Harold D. LeMar, Attorneys for Plaintiffs.

Duly sworn to by P. F. Petersen et al. Jurats omitted in printing.

[fol. 36] EXHIBIT "A" TO AMENDED PETITION

House Roll No. 51

Introduced by Representative Ed A. Smith, of Douglas

Title

An act to establish a standard loaf of bread for the State of Nebraska; provide a penalty for the violation of said act; and to repeal Section- 89-142, 89-143, 89-144 and 89-145 Compiled Statutes of Nebraska, 1929.

Be it enacted by the People of the State of Nebraska:

Section 1. It shall be the duty of the Department of Agriculture to enforce all provisions of this act. It shall make or cause to be made all necessary examinations and shall have authority to promulgate such rules and regulations as are necessary to promptly and effectively enforce the provisions of this act.

Section 2. Every loaf of bread made for sale in the State of Nebraska shall be of the following weights avoirdupois; one-half pound, one pound, one and one-half pounds, and also in exact multiples of one pound and of no other weights. Whenever twin or multiple loaves are baked, the weights herein specified shall apply to each unit of the twin or multiple loaf, provided that a twin one and one-half pound loaf may be made and sold, but units of said loaf must not be sold separately; Provided that none of the provisions of this act shall apply to fancy breads.

Section 3. The Secretary of Agriculture shall prescribe reasonable tolerances or variations in excess, but not under the weights mentioned in the preceeding section, within which all loaves shall be baked, and also the time for which said weights shall be maintained.

Section 4. Any person, firm or corporation violating [fol. 37] any of the provisions of this Act, shall be punished by a fine of not less than ten dollars nor more than one hundred dollars.

Section 5. That said Sections 89-142, 89-143, 89-144 and 89-145, Compiled Statutes of Nebraska, 1929, are hereby repealed.

Max Kier, Speaker of the House. Vernon D. Andrews, Chief Clerk of the House. Theodore W. Metcalfe, President of the Senate. George C. Snow, Secretary of the Senate.

Approved April 21, 1931, 12:01 o'clock P. M.
Charles W. Bryan, Governor.

This is to certify that the within House Roll No. 51 originated in the House and passed Legislature at its Forty-Seventh Session on the 15th day of April, 1931.
Vernon D. Andrews, Chief Clerk of the House.

[fol. 38] EXHIBIT "B" TO AMENDED PETITION

Rules and Regulations Governing the Enforcement of the Standard Bread Loaf Law.

1. Every bakery must be properly lighted, drained, plumbed and ventilated and conducted with strict regard to the influence of such conditions upon the health of all persons therein employed.

2. The floor, side walls, ceilings, furniture, receptacles, implements and machinery of every bakery and all cars, trucks and vehicles used in the transportation of all bakery food products shall be at no time kept in an unclean, unhealthful and/or unsanitary conditions.

3. All trucks, trays, boxes, baskets, buckets and other receptacles, chutes, platforms, racks, tables, shelves and

all knives, saws, cleavers and other utensils and machinery must be thoroughly cleansed daily and the clothing of operators, employees, clerks or other persons therein employed must be clean.

4. The side walls and ceilings of every bakery shall be brick, cement, plastered, wainscoted or ceiled with metal or lumber and shall be oil painted or kept well lime washed and all interior wood work in every bakery shall be kept well oiled or painted with oil paints or lime washed and kept clean and every building, room, basement or cellar shall have an impermeable floor made of cement or tile laid in cement, brick, wood or other suitable non-absorbent material which can be flushed and washed clean with water.

5. The doors, windows and other openings of every bakery shall, during the fly season, be fitted with self-closing screen doors and wire window screens of not coarser than fourteen mesh wire gauze.

6. Every bakery must have convenient toilet or toilet rooms separate and apart from the bakery. The floors of [fol. 39] such toilet rooms shall be of cement, tile, wood, brick or other non-absorbent material and shall be kept in a thoroughly clean and sanitary condition. Such toilets shall be furnished with separate ventilating flues, or pipes, discharging into soil pipes, or on outside of the building. Lavoratories and wash rooms shall be supplied with soap, water and towels, and all persons employed in the bakery must before beginning work or after visiting the toilet wash their hands and arms thoroughly in clean water.

7. No person shall be allowed to live or sleep in any room of the bakery.

8. No person afflicted with any infectious, contagious, or venereal disease shall be permitted to work in any manner in any bakery.

9. Loaves of bread made for sale in the State of Nebraska shall only be of the sizes specified by law.

10. The name and the net weight of the bakery product must be clearly printed on the outside of the wrapper if wrapped previous to the time of sale.

11. Fancy bread, as defined by the Secretary of Agriculture of the State of Nebraska, shall not be considered as coming within the scope of the law.

12. Milk bread is the bread obtained by baking a wheat bread dough in which not less than one-third of the water ingredient has been replaced by milk or the constituents of milk solids in proportions normal for whole milk. It conforms to the moisture limitation for wheat bread.

13. Rye bread is the bread obtained by baking a dough which differs from wheat dough in that no less than one-third of the flour ingredients has been replaced by rye flour. It conforms to the moisture limitations for wheat bread.

[fol. 40] 14. Raisin bread is the bread obtained by baking wheat bread dough, to which have been added sound raisins in quantity equivalent to at least 3 ounces for each pound of the baked product and which may contain proportions of sweetening and shortening ingredients greater than those commonly used in wheat bread dough.

15. Weights shall be determined by averaging the weight of not less than five loaves of a given lot, of the same marking and manufacture, if available.

16. A tolerance of one ounce per half pound loaf; two ounces per pound loaf and 10% of all larger loaves of bread shall be allowed in excess of the minimum weight.

17. Tolerances shall apply for a period of twelve hours after baking.

[File endorsement omitted.]

IN DISTRICT COURT OF LANCASTER COUNTY

[Title omitted]

ANSWER—Filed Sept. 30, 1931

Come now the defendants and for answer to the petition of the plaintiffs state:

I

Admit the allegations in paragraph "I" of the petition; [fol. 41] admit that the defendant Charles W. Bryan is the duly elected, qualified and acting Governor of the State of Nebraska, and that the defendant Dwight F. Felton is the duly appointed, qualified and acting deputy secretary of the

Department of Agriculture, there being no secretary thereof; admit that said defendants will unless enjoined by this Court enforce the provisions of House Roll No. 51, now Chapter 162, Session Laws of Nebraska for 1931; admit the passage of said House Roll No. 51 by the 1931 session of the Legislature of Nebraska, and admit that said House Roll No. 51 does not permit the sale in Nebraska of a 20 ounce loaf of bread.

II

The defendants deny each and every allegation contained in said petition except such allegations as in paragraph "I" have been admitted to be true.

II

Further answering defendants allege that under the authority of said House Roll No. 51, the Department of Agriculture of the State of Nebraska on the 19th day of September, 1931, adopted rules and regulations with reference to the enforcement of said Act, a copy of which rules and regulations is hereto attached, marked "Exhibit A" and by reference made a part hereof.

Wherefore defendants pray that the petition of the plaintiffs be dismissed and that they recover their costs herein expended.

Charles W. Bryan, as Governor of the State of Nebraska, and Dwight F. Felton, as Deputy Secretary of the Department of Agriculture of the State of Nebraska, Defendants, by C. A. Sorensen, Attorney General; R. R. Strehlow, Attorneys.

[fol. 42] *Duly sworn to by Dwight F. Felton. Jurat omitted in printing.*

EXHIBIT "A" TO ANSWER

State of Nebraska, Department of Agriculture

By virtue and under the authority of House Roll No. 51, Chapter 162, Session Laws of Nebraska for 1931, the following rules and regulations are hereby prescribed and promulgated:

I. The tolerance and/or excess variation in weight of bread baked for sale in Nebraska shall not exceed:

(a) One and one-half ounces for one-half pound loaves.

(b) Three ounces for one pound loaves.

(c) Four and one-half ounces for one and one-half pound loaves.

(d) Six ounces for two pound loaves.

(e) The same relative tolerance for loaves of larger size permitted to be sold under said Act.

II. Bread for sale in Nebraska shall be so made and baked that it will maintain after cooling its required mini- [fol. 43] mum weight for not less than twelve hours under normal conditions. The baker of such bread, however, shall not be responsible for the maintenance of said minimum weight after delivering the same to a retail dealer or consumer, or to a transportation agency in Nebraska for delivery to a retail dealer or consumer.

III. Weights shall be determined by averaging the weight of not less than five loaves, if available, of a given lot of bread of the same grade, size, and baking.

IV. These rules shall not apply to fancy breads.

V. These rules and regulations supersede all other rules and regulations heretofore made.

Dated this 19th day of September, 1931.

(Signed) Dwight F. Felton, Deputy Secretary of Agriculture. (Signed) Charles W. Bryan, Governor.

[File endorsement omitted.]

IN DISTRICT COURT OF LANCASTER COUNTY

[Title omitted]

REPLY—Filed Oct. 28, 1931

The plaintiffs, for reply to the new matter set forth in paragraph three of defendant's answer, allege as follows:

[fol. 44] I

That the rules adopted on September 19th, 1931, by the Deputy Secretary of Agriculture under alleged authority

contained in House Roll 51, were not made in good faith but were adopted with the intention of evading and circumventing the issues of this action, and were adopted during the pendency of this action after the commencement thereof, and during the time when the defendants and each of them were restrained by a temporary restraining order from doing any act or thing looking to the enforcement of said House Roll 51.

2

Further replying to said new matter set forth in said Paragraph three plaintiffs allege that under said House Roll 51 the Deputy Secretary of Agriculture, there being no Secretary of Agriculture, is without any power or authority to adopt or promulgate any rules whatever.

3

For further reply to said Paragraph three the plaintiffs allege that even though said rules were otherwise legal they are promulgated under an unlawful delegation of Legislative authority, are indefinite and uncertain, and are arbitrary and unreasonable, thereby violating Article Two, Section One, and Article Three Section One of the Constitution of Nebraska, the Sixth Amendment to the Constitution of the United States and Article One Section Eleven of the Constitution of Nebraska, and the Fourteenth Amendment to the Constitution of the United States and Article One Sections Three and Twenty-five of the Constitution of Nebraska.

Wherefore plaintiffs pray judgment as applied for in the petition herein filed.

John C. Grover, Harold D. Le Mar, Attorneys for Plaintiffs.

[fol. 45] *Duly sworn to by P. F. Petersen. Jurat omitted in printing.*

IN DISTRICT COURT OF LANCASTER COUNTY

111-290

P. F. PETERSEN BAKING COMPANY et al., Plaintiffs,

vs.

CHARLES W. BRYAN, as Governor of the State of Nebraska, et al., Defendants

DECREE—Jan. 30, 1932

This action is a suit for an injunction to restrain the enforcement of the Standard Weight Bread Law. The plaintiffs are bakers and contend that the law, Chapter 164 of the Laws of 1931, is unconstitutional and void as in contravention of the Fourteenth Amendment to the Federal [fol. 46] Constitution, claiming:

1. That it would be impossible for bakers to comply with the requirements of said law in that a baker cannot control the evaporation, otherwise called tolerance or shrink, of a loaf of bread after it is baked. They claim that the shrinkage or tolerance is controlled by evaporation of water contents of the bread and also affected by the atmospheric conditions on the baking days. Plaintiffs contend, therefore, that the law is arbitrary and unreasonable:

2. They also contend that it is unreasonable and arbitrary in that it prohibits the sale of bread loaves of other than half pound, one pound, one pound and a half or multiples of a pound loaf; thus prohibiting the sale of a twenty ounce loaf, which they claim is the most popular size loaf now offered on the market and which is demanded by the buying public:

3. That the law contravenes the state constitution in that it delegates legislative power to an administrative officer in that the Act gives the state Secretary of Agriculture the sole power of fixing the amount of tolerance allowable:

4. That the enforcement of the law would deprive the bakers of property without due process of law in that to compel them to comply with the law imposes a financial loss upon bakers:

5. That the purpose of the Act is an unreasonable and unnecessary attempt to prevent fraud by the bakers upon the buying public, and contend that it would prohibit the baker from giving to the purchasing public the benefit of the fluctuating price of flour and other bread ingredients, and to that extent, at least, is detrimental to the buying public rather than beneficial:

6. In addition to the foregoing complaints plaintiffs claim that the whole Act is indefinite and uncertain in that it [fol. 47] fails to define reasonable tolerance to be fixed by the Secretary of Agriculture; fails to define the crime of selling overweight bread; fails to define "fancy bread"; fails to fix the time for which tolerance shall prevail; fails to specify in detail the powers and duties of the Secretary of Agriculture in fixing the tolerance; and fails "to make clear" whether the Act applies to bread for sale in Nebraska or bread baked in Nebraska and sold outside of Nebraska; and also that the Act is broader than the title and therefore unconstitutional.

The whole subject and history of the enactment of the Standard Weight Bread Law in Nebraska has been a controverted question for a number of years. The first Act of 1921 (Chapter 2 Laws of 1921) was held to be constitutional by the Nebraska Supreme Court and on appeal to the Supreme Court of the United States was held unconstitutional by that court in the case of Jay Burns Co. vs. Bryan, Governor, decided in 1924. The main feature in that Act contested was that it allowed a tolerance or shrink of only two ounces per pound. In other words it permitted a shrink of two ounces per pound in a loaf of bread twenty-four hours after baking, and no more. The Supreme Court of the United States, by a majority opinion, held that a tolerance of two ounces was not sufficient and that its imposition was unreasonable and arbitrary.

A dissenting opinion by Justice Brandeis, concurred in by Justice Holmes, stated that in their opinion there was sufficient evidence in the record, then before that court, to support a different conclusion than that reached by the majority of the court. Justice Brandeis contends that was a matter entirely in the discretion of the legislature and stated expressly that to weigh the sufficiency of the evidence

was for the court to take an attitude of "super Legislative [fol. 48] power or abilities."

Following that decision the legislature enacted Chapter 146, Laws of 1927. This second act attempted to correct the evils of the first, and fixed the tolerance at one ounce under and three and a half ounces over the fixed weight in twenty-four hours, and provided that the baker should be liable for a misdemeanor for the sale of bread which he baked if the shrinkage or tolerance should exceed the stated allowance. This Act, in turn, was attacked in the Federal District Court of Nebraska. Three judges sitting held the second law unconstitutional in that it made the baker liable for the penalty, and guilty of a misdemeanor, for bread sold by a retailer after it had left the custody and control of the baker. In other words, as this court views it, the Federal Court decision made that part of the act void which made the wholesale baker liable for the misdemeanor due to shrinkage of bread that may have been caused by the improper care by a retail grocer exposing the bread to atmospheric conditions over which the baker himself had no control. This decision expressly holds that the court could not say but that the inclusion of that provision was the inducement to the passage of the whole act, and therefore declared the whole void, but apparently not disapproving the tolerance provision.

The legislature again enacted a Standard Bread Law in 1931 when the Act now in question was passed. Chapter 162, Laws of 1931. This Act provides that the Secretary of Agriculture shall provide a reasonable tolerance for the enforcement of the Act thus attempting to cure the objectional feature found in the second by the Federal District Court.

The present law requires bread baked for sale in Nebraska should be only loaves of one-half pound, one pound, one and one-half pounds, two pounds and multiples of [fol. 49] pounds for larger loaves, and provides that the Secretary of Agriculture shall prescribe reasonable tolerance or variations, and expressly provides that no tolerance for less than the weights fixed above should be allowed. Under the first rules and regulations prescribed by the Secretary of Agriculture a tolerance of two ounces to the

pound was fixed and this suit was filed claiming the tolerance as thus fixed was unreasonable, and the act was void, as determined and decided by the Supreme Court of the United States. Thereafter, and before the trial of this case, the Secretary of Agriculture published new rules fixing the excess tolerance at three ounces per pound. The plaintiffs now contend that this case must be decided under the rules existing at the time the suit was filed.

The record submitted to the court in the case now under consideration is, by agreement of parties, a stipulated typewritten copy of the record and evidence on which the first case was submitted to the Supreme Court of the United States, together with a typewritten copy of the same evidence submitted to the Federal District Court in the second case, and also some additional typewritten matter together with one or two witnesses who gave oral testimony, primarily directed to the question of the interpretation of the words "fancy bread" as used in the present law. It consists mainly of statements of bakers and expert chemists in narrative form, the great bulk of which is purely argument, pro and con, as to the merits of any standard weight bread law. This matter should properly have been submitted to the legislature in determining the question of whether or not there is need of such a law.

The whole record discloses that the great bulk of the bread sold to the consuming public is now baked in large bakeries; that each baker, apparently, has his own formula for making bread; that some of the bakers have a particular size and weight loaves and advertise them under various trade names; that at the present time a large propor-[fol. 50] tion of the bread sold by the large bakers is wrapped in waxed paper with printed trade names, etc., thereon; that bakers ship bread long distances and sell throughout this and bordering states, and non-resident bakers ship bread into Nebraska; that at the present time a large proportion of the bread baked is what is called twenty ounce loaves, otherwise known as the Pullman loaf; that most of the bakers, and particularly all of the large bakers, in making white or common bread, use mixing machines in preparing the dough for the oven; that the dough which goes into each loaf is scaled and cut to size by a scaling machine, that can be set for different sizes. Some of the bakers testified that while these scaling machines do

not operate with mathematical accuracy, and that in their operation there is loose flour scattered about to prevent sticking and often particles of this loose flour or dough will fasten to or chip off, and some witnesses say they cannot, with certainty, scale the dough so as to produce an exact weight loaf. Others say that dough can be scaled so as to produce a loaf within a fraction of an ounce of a desired loaf of bread. There is much testimony of bakers and expert chemists, officers and employees of bakers' associations and large flouring mills which goes into detail as to conditions causing shrinkage or tolerance or evaporation in bread from the time the dough is mixed until the baked bread is sold to the consumer, in periods of from one to sixty hours or more.

All these matters are of a character which, in the view of this court, should properly have been submitted to the legislature and undoubtedly were. It is not for the court to determine the need and necessity of legislation upon such subjects. That is wholly a question for legislative determination. However, if upon a proper trial it is shown to the court that it were impossible, or practically so, for bakers to comply with such a law the court would hold it [fol. 51] to be unreasonable, depending, of course, upon the record submitted to the court. But in the record now before this court there is very much of a dispute on the question of whether or not bakers can comply with the tolerance provision of this Act. As this court reads the record it cannot fairly be studied without a conclusion that that question is wholly one of weighing the evidence on the respective sides; that is, there is evidence of witnesses who testified that such a law cannot be complied with, and on the other hand there is competent evidence, and testimony, from which it can only fairly be concluded that it can be complied with, and that without much difficulty. Some testified that they made tests for determining this very question under the requirements of the present Standard Weight Bread Law and that they had no difficulty in scaling their breads so as to easily comply with the provisions of the law. Tabulated results of tests substantiated these statements. Another testifies, and has computed a table of results, of experiments made of bread from various bakers which he purchased at retail stores and showed that they shipped this bread from Omaha to as far as Den-

ver, Colorado, and Cheyenne, Wyoming, that the bread was unloaded at these points and returned to Omaha. Weights were taken at the time the bread was purchased, soon after baking, and again upon the return from these trips and at stated intervals thereafter. The records show that only one case of such shipped bread showed a shrink of two and one-half ounces or more. Other witnesses testified to tests and careful weights being taken, the weighing being at stated intervals of six and twelve hour periods from immediately after baking until more than seventy-two hours thereafter. Some loaves showed a shrink or tolerance in excess of two, possibly two and a half ounces, and in a few instances possibly three onces, but on cross-examination this witness said that he made no attempt, in either the baking or scaling of the dough, to comply with [fol. 52] the present bread law or its regulations as established by the Secretary of Agriculture. He stated that he merely followed orders as given him by his superior and that he made no attempt, in the test at least, to comply with the bread law. Other bakers and expert chemists employed by large baking associations and flouring mills, who were undoubtedly efficient and competent, testified they made tests by scaling and baking dough and thereafter weighing at certain intervals, and on cross-examination stated that they were not trying, at the time, to comply with the Nebraska Bread Law Most of these expert witnesses were residents of, and made their tests in, other states.

Schedules of other tests showed that at least some bakers could and do comply with the tolerance provision. One testified that he operated numerous large bakeries, one in Omaha and at other central points. The substance of this testimony was that he had made tests for the purpose of determining whether he could comply with the Nebraska Bread Law and the result of such tests, both with his own baking and the purchase of many other brands of bread. Weights taken at various intervals showed that the tolerance provision could be complied with. See defendant's exhibits 37, 38, 39 and 40 to 40C, pages 324 to 330.

One of plaintiffs' witnesses stated that he could comply with the tolerance provision of the bread law but that it would be necessary to use a lower quality of ingredients than he thought ought to be used. In other words a lower grade of bread would be produced. And he frankly stated

that he thought that any bread should be based on nutritive contents rather than on weight.

One Lincoln baker testified that during the period of the appeal in the first case, there being no supersedeas, he did bake bread under the then existing law, but said that the cost and overhead was greater than had he not been complying with the law,

[fol. 53] One baker says much about the financial loss that his company would suffer if compelled to comply with the present law. The loss partly being in the profits now derived from the sale of breads the size of which would be prohibited under the present law. It would also require him to procure considerable new equipment, particularly pans of the size necessary under the proposed law and, too, that there is considerable oiled paper on hand in which the present size loaves are wrapped. He claims that all this would have to be discarded and wasted. Other bakers gave like general testimony. It is the opinion of this particular court that that matter is wholly a question for legislative determination. I think it must be conceded that every regulatory legislation, if otherwise proper, necessarily entails some expense and some extra cost upon those whom it attempts to regulate.

Another contention of the plaintiffs is that to limit the size of loaves to standard pounds and half pounds and multiples thereof would prevent the baker from varying the size of his loaf to meet the fluctuation of the cost of ingredients, and therefore prevent the baker from giving the consumer the benefit of the lower cost of ingredients. The answer to that is set forth in this record by testimony of other bakers that there is nothing to prevent the baker from varying the price of his loaf. That also, in the opinion of this court, is a matter wholly for the legislature to determine.

While this court, of course, must hold that the holding of the Supreme Court of the United States in the Burns case is binding upon this court to the extent that a tolerance of two ounces per pound would be unreasonable, nevertheless this court is firmly of the conclusion that the record now before us discloses the fact that even at a two ounce tolerance such a law could, under modern baking conditions, be complied with without a great deal of difficulty, admitting, [fol. 54] however, that there is evidence to the contrary.

But in the opinion of this court the conflict in evidence would be wholly a matter for the legislature to determine and not for the court.

Under the tolerance allowance first fixed by the Secretary of Agriculture of two ounces per pound this court would feel obliged to hold that the weight of the evidence, as established by the record now, would be to the effect that even a two ounce tolerance could and in fact had been complied with by bakers of this state. However, the Secretary of Agriculture has adopted new rules fixing an excess tolerance of three ounces. This court finds that under the evidence in this case there can be no question but that such a tolerance, as three ounces, is sufficient and that such a tolerance requirement could readily be complied with by bakers affected.

In answer to the contention of plaintiffs that this court should not take into consideration the new rules adopted subsequent to the filing of this case, this court feels that its duty is otherwise and that if it did hold that the tolerance as first fixed was unreasonable it would merely result in a new rule being adopted and another suit filed to test the reasonableness of the new rule.

That brings us to the question of whether or not the whole Act is void as delegating legislative powers to an administrative officer in that the Act authorizes the Secretary of Agriculture to prescribe reasonable tolerance. It must be remembered that both the courts of this state and also the Supreme Court of the United States has held that regulation of weights of bread by adoption of a standard weight law is a proper subject of legislation. Many other states have such laws which have been in force for a number of years. Some of them not unlike the law now in question in this suit.

The experiments in this state in the two previous Acts in which the legislature attempted on two different occa- [fol. 55] sions to fix tolerance that would be lawful have resulted disastrously, and by this Act the legislature, because of the apparent inability of the legislature to fix a definite reasonable tolerance, now seeks to avoid unreasonableness by making provisions so that the Secretary of Agriculture can meet varying atmospheric conditions, which bakers claim might arise and which materially affect the bread shrinkage. Under the present law if, as

sometimes happens in Nebraska, an excessively hot, dry season should occur then, as bakers say, under such conditions there is an excessive shrink in bread weight, the Secretary of Agriculture could immediately, if necessary, provide for such condition. Therefore it seems to this court that the legislature has thus wisely provided for what the courts have chosen to call an administrative detail, which under the present day broad field of government is necessary. We therefore conclude that the Act is not objectionable for that reason.

Plaintiffs attack the law claiming that the provision exempting "fancy bread" is so indefinite as to make the law unintelligible and claim that there is no such term known among bakers. We think that the term exempting "fancy bread" is sufficiently definite in that the necessary opinion or conclusion is that a fair interpretation of the act is that other than fancy bread or in other words common white bread does fall within the law. This court does not see merit in other objections.

In view of the foregoing conclusions the court finds generally against the plaintiffs and in favor of the defendant, therefore the plaintiffs' petition is herewith dismissed and the restraining order heretofore issued is dissolved and vacated. And in case plaintiffs shall appeal herefrom and desire to supersede this judgment, supersedeas bond is hereby fixed in the amount of $1,000.00.

Done at Lincoln, Nebraska, January 30, 1932.

To all of which plaintiffs except.

J. H. Broady, Judge.

[fol. 56] In District Court of Lancaster County

[Title omitted]

Motion for New Trial—Filed Feb. 2, 1932

Plaintiffs move the court to set aside the decree herein and grant a new trial for the following reasons:

1. That the decree is not sustained by sufficient evidence.

2. That the decree is contrary to law.

3. On account of errors of law occurring at the trial and duly excepted to by the plaintiffs.

4. That the court's finding that the principal involved in the 1921 Nebraska Bread Weight Law (Chapter 2 Laws of 1921) permitted a shrinkage of two ounces per pound is not sustained by the evidence.

5. That the court's finding that the Supreme Court of the United States held the said 1921 Nebraska Bread Weight Law unconstitutional upon the grounds that the tolerance of two ounces permitted therein was not suffi- [fol. 57] cient, is not sustained by the evidence.

6. That the court's finding that the United States District Court for Nebraska is passing upon the constitutionality of Chapter 146 Laws of 1927 held the same unconstitutional, but did not disapprove the tolerance provision, is not sustained by the evidence.

7. That the court's finding that the first rules and regulations prescribed by the Secretary of Agriculture fixed a tolerance of two ounces per pound is not sustained by the evidence.

8. That the court's finding that the Secretary of Agriculture before the trial of this case published new rules is not sustained by the evidence.

9. That the court's finding that the evidence presented in this cause is purely argumentative, pro and con, as to the merits of any standard bread weight law, is not sustained by the evidence.

10. That the court's finding that a large proportion of the bread sold by the Nebraska bakers is wrapped in wax paper, is not sustained by the evidence.

11. That the court's finding that a large proportion of the bread baked in Nebraska is "what is called the 20-ounce loaves, otherwise known as the Pullman Loaf", is not sustained by the evidence.

12. That the court's finding that said bakers testified that it is possible to produce a loaf of bread within a fraction of an ounce of the desired weight, is not sustained by the evidence.

13. That the court's finding that many bakers testified that they were able to comply with the requirements of the present bread weight law is not supported by the evidence.

14. That the court's finding that under a previous law bakers complied therewith, "there being no supersedeas", is contrary to the evidence.

[fol. 58] 15. That the court's finding that it is possible to vary the price of a loaf of bread to reflect fluctuation of costs in ingredients, is not sustained by the evidence.

16. That the court's finding that a two ounce tolerance can be complied with "under modern baking conditions", even though the Supreme Court of the United States held differently, is not sustained by the evidence.

17. That the court's finding that the Secretary of Agriculture promulgated any rules whatsoever for the enforcement of this act, is not sustained by the evidence.

18. That the court's finding that the Secretary of Agriculture has adopted new rules fixing an excess tolerance of three ounces is not sustained by the evidence.

19. That the court's finding that "under the evidence in this case there can be no question but that such a tolerance as three ounces is sufficient, and that such a tolerance requirement could readily be complied with by bakers effected", is not sustained by the evidence.

20. That the court's finding that the delegation of Legislative authority to adopt rules fixing reasonable tolerances is a delegation of authority to provide an "administrative detail", is not sustained by the evidence.

21. That the court's finding that the term "fancy bread" is all bread other than common white bread, is not sustained by the evidence.

22. That the court erred in holding under the evidence and under the decision of the United States Supreme Court in the J. Burns Baking Company versus Bryan that "the weight of the evidence as established by the record now [fol. 59] would be to the effect that even a two ounce tolerance could and in fact had been complied with — the bakers of this State.

23. That the court erred in deciding this cause upon the bases of the rules of tolerance adopted by the Deputy Secretary of Agriculture subsequent to the institution of this suit, for the reason that plaintiff was entitled to have a

determination made upon the invasion of its property rights as of the time of filing of suit.

24. That the court erred in deciding the cause upon the bases of the rules of tolerance adopted by the Deputy Secretary of Agriculture subsequent to the institution of this suit for the reason that the conclusion of the court is without any evidence to support it.

25. That the court erred in holding that if upon a proper trial it is shown to the court that it were impossible, or practically so, for bakers to comply with such a law the court would hold it unreasonable for the reason that there is no evidence to sustain it.

26. That the court erred in holding that the experiments in shrinkage on tolerances introduced by the plaintiffs were not entitled to consideration on account of the same having been made on regular run of products rather than upon a specific attempt to comply with the law, for the reason that the same is contrary to the law and is not sustained by the evidence.

27. That the court erred in holding that it is a Legislative function to weigh the conflicting evidence as to the reasonableness of a statute, and that the weight of said evidence is not a function of the court.

28. That the court erred in failing to give consideration to the invalidity of the said acts under the 6th Amendment to the Constitution of the United States and the 14th Amendment to the Constitution of the United States as [fol. 60] presented by paragraphs three, twenty-nine and thirty of plaintiffs' petition, paragraphs three, twenty-nine and thirty of plaintiffs' amended petition, and paragraph three of plaintiffs' reply.

29. The court erred generally in finding for the defendants and against the plaintiffs for the reason that any excess tolerance is arbitrary and unreasonable and in violation of the 14th Amendment of the Constitution of the United States, and Article One Section Three, and Article One Section Twenty-five of the Constitution of Nebraska.

John C. Grover, Harold D. LeMar, Attorneys for Plaintiffs.

[File endorsement omitted.]

IN DISTRICT COURT OF LANCASTER COUNTY

[Title omitted]

ORDER OVERRULING MOTION FOR NEW TRIAL—Feb. 5, 1932

This cause now comes on to be heard on the motion of the plaintiffs to set aside the judgment of the court heretofore [fol. 61] rendered and entered herein, and for a new trial of this cause, and is submitted to the court, on due consideration whereof, the Court doth overrule said motion, to which plaintiffs except, and plaintiffs are given forty days from rising of court to serve bill of exceptions.

Supersedeas bond for appeal fixed at $1,000.00.

(Supersedeas bond, appearing in District Court transcript at page 91, omitted.)

[fol. 62] IN DISTRICT COURT OF LANCASTER COUNTY

[Title omitted]

NOTICE OF APPEAL—Filed Feb. 9, 1932

To the defendants above named and to C. A. Sorensen and R. R. Strehlow, attorneys for defendants:

You and each of you, and all persons interested, are hereby notified that the above named plaintiffs intend to appeal the above named case to the Supreme Court of the State of Nebraska.

John C. Grover, Harold D. LeMar, Attorneys for Plaintiffs.

[File endorsement omitted.]

[fols. 63 & 64] IN SUPREME COURT OF NEBRASKA

ARGUMENT AND SUBMISSION—Jan. 5, 1933

The following causes were argued by counsel and submitted to the court:

28356. P. F. Petersen Baking Co. v. Bryan. Appeal, Lancaster County.

[fols. 65 & 66] IN SUPREME COURT OF NEBRASKA

No. 28356

P. F. PETERSEN BAKING Co. et al., Appellants,

v.

CHARLES W. BRYAN, as Governor of Nebraska, et al., Appellees

Appeal from the District Court of Lancaster County

JUDGMENT—March 2, 1933

This cause coming on to be heard upon appeal from the district court of Lancaster county, was argued by counsel and submitted to the court; upon due consideration whereof, the court finds no error apparent in the record of the proceedings and judgment of said district court. It is, therefore, considered, ordered and adjudged that said judgment of the district court be, and hereby is, affirmed, and that appellees recover of and from appellants their costs herein expended, taxed at $—; for all of which execution is hereby awarded, and that a mandate issue accordingly.

Charles A. Goss, Chief Justice.

[fol. 67] IN SUPREME COURT OF NEBRASKA

28356

P. F. PETERSEN BAKING Co.,

v.

BRYAN

OPINION—Filed March 2, 1933

1. The making or selling of bread is a business subject to police regulation.

2. Legislatures, not courts, are primarily the judges of necessities for police regulation and courts can interfere only when such regulation exceeds a reasonable exercise of authority. Schmidinger v. City of Chicago, 226 U. S. 578.

3. Mere inconvenience to those conducting a business subject to police regulation does not vitiate the exercise of the power to regulate.

4. An act of the legislature fixing standard weights of bread loaves and providing for excess tolerances, but remitting to the secretary of agriculture the fixing by regulation of reasonable tolerances, does not amount to a delegation of legislative power.

5. "Where one complains that regulations promulgated under legislative authority by a state board are unreasonable and oppressive, he should seek relief by applying to that board to modify them." Red "C" Oil Mfg. Co. v. Board of Agriculture of North Carolina, 22 U. S. 380.

[fol. 68] 6. The act to establish a standard loaf of bread (Laws 1931, ch. 162; Comp. St. Supp. 1931, secs. 89-169 to 89-172) authorizing reasonable excess tolerances to be fixed by the state secretary of agriculture, which tolerances were established at the rate of three ounces to each pound of the respective standard loaves, held not violative of the State Constitution or of the Fourteenth Amendment of the Constitution of the United States, in the respects complained of.

[fol. 69] Heard Before Goss, C. J.; Rose, Dean, Good, Eberly, Day, and Paine, JJ.

Goss, C. J.:

Plaintiffs sued for an injunction to prevent the enforcement of "An act to establish a standard loaf of bread" and making a violation a misdemeanor. Laws 1931, ch. 162; Comp. St. Supp. 1931, secs. 89-169 to 89-172. From a decree rendering a judgment for defendants, plaintiffs appeal. Under the Code of Civil Procedure the appeal is for trial de novo. Comp. St. 1929, sec. 20-1925.

Section 1 of the act charged the department of agriculture with the duty of enforcement and authorized it to promulgate necessary rules and regulations. Sections 2 and 3 follow:

"Sec. 2. Every loaf of bread made for sale in the state of Nebraska shall be of the following weights avoirdupois: One-half pound, one pound, one and one-half pounds, and also in exact multiples of one pound and of no other weights.

Whenever twin or multiple loaves are baked, the weights herein specified shall apply to each unit of the twin or multiple loaf, provided that a twin one and one-half pound loaf may be made and sold, but units of said loaf must not be sold separately: Provided that none of the provisions of this act shall apply to fancy breads.

"Sec. 3. The secretary of agriculture shall prescribe reasonable tolerances or variations in excess, but not under the weights mentioned in the preceding section, within which all loaves shall be baked, and also the time for which said [fol. 70] weights shall be maintained."

The secretary of the department of agriculture duly promulgated rules and regulations. He prescribed that tolerances should not exceed one and one-half ounces for half-pound loaves, three ounces for pound loaves, four and one-half ounces for one and one-half pound loaves, six ounces for two pound loaves and the same relative tolerance for loaves of larger size. The rules provided that bread for sale in Nebraska should maintain its required minimum weight for not less than twelve hours under normal conditions, but that the baker should not be held responsible for the maintenance of the minimum weight after delivery to a retail dealer or consumer or to a transportation agency in Nebraska for delivery to a retail dealer or consumer; and provided that weights shall be determined by averaging the weight of not less than five loaves, if available, of a given lot of bread of the same grade, size and baking.

The act in question repealed an existing law passed in 1921 and amended in 1927. The 1921 law was the subject of litigation in 1922. It was sustained in the district court and the judgment of this court affirmed the validity of the act. Burns Baking Co. v. McKelvie, 108 Neb. 674. On error proceedings the United States Supreme Court, two members dissenting, reversed the judgment of this court on the ground that the tolerance was unreasonable and arbitrary and therefore repugnant to the Fourteenth Amendment. Burns Baking Co. v. Bryan, 264 U. S. 504. That court found from the evidence that it was "impossible to [fol. 71] manufacture good bread in the regular way without frequently exceeding the prescribed tolerance and incurring the burden of penalties prescribed by the statute." The act of 1921 (Laws of 1921, ch. 2), there considered,

provided for a tolerance at the rate of two ounces per pound, to be maintained at least twenty-four hours after baking, averaged by weighing not less than twenty-five loaves of any one unit. The act of 1931, attacked here, by its authorized regulations, increased the tolerance to three ounces per pound, to be maintained not less than twelve hours under normal conditions, averaged by weighing not less than five loaves. But the regulation relieved the baker from maintaining the weights after delivery.

We deem it unnecessary to review in detail the testimony of the numerous witnesses for both parties as to the practicability of compliance with the tolerance as now fixed. It is sufficient to state our conclusions of fact in respect thereto. Actual tests of regular run of bread baked by the plaintiffs and purchased from them indicate that the tolerance is ample. The evidence shows that bakers having plants in many states comply with quite similar provisions in laws and ordinances in some of these states and from choice pursue the same methods as to weights in the other states where they do business but where such laws and regulations do not exist. We find that the great preponderance of the evidence shows that plaintiffs, and others similarly situated for whom they sue, may readily comply with the weight and tolerance provisions of the present [fol. 72] act.

Plaintiffs argue that the title is not broad enough to prohibit weights of bread of certain types now baked. The evidence applicable to this point refers especially to a twenty-ounce loaf. We are of the opinion that an act to establish a standard loaf of bread and to prohibit violations is broad enough to prohibit other than standard sizes as fixed by the act. While it might inconvenience the bakers to shorten or lengthen the twenty-ounce loaf, so as to make one of legal weight, or to adjust their appliances so as to make prescribed sizes, these are matters generally for consideration by the legislature and not by the court. The making and selling of bread is a business subject to police regulation. Courts can interfere only when regulations arbitrarily exceed a reasonable exercise of authority. Mere inconvenience to those conducting a business subject to police regulation does not vitiate the exercise of the power. Schmidinger v. City of Chicago, 226 U. S. 578; Burns Baking Co. v. McKelvie, 108 Neb. 674.

It is claimed that the act unlawfully delegates legislative authority in violation of section 1, art. II of the Constitution of Nebraska. Such delegation to an administrative body as took place here is a part of the settled legislative policy of this state. Section 71-2302, Comp. St. 1929, places sanitation and quarantine under the department of public welfare, authorizes it to adopt and publish reasonable rules and regulations and provides a penalty for violation of such rules and regulations. Section 75-201 gives the state railway commission power to regulate rates and service of [fol. 73] railroads and all other intrastate common carriers and, under section 75-218, a violation of any order is a misdemeanor subject to penalty. Other instances might be cited.

The legislature of North Carolina put oil inspection under the commissioner of agriculture of that state. It authorized the board of agriculture to make rules and regulations for inspection and to adopt such standards of safety not in conflict with the act as it might deem necessary to provide the people of the state with satisfactory illuminating oil. Section 8 of the act (Public Laws N. Car. 1909, ch. 554) made a violation a misdemeanor. The supreme court of the United States held that remitting to the proper state board the establishment of rules and regulations to determine what oils measure up to such standards did not amount to a delegation of legislative powers. Red "C" Oil Mfg. Co. v. Board of Agriculture of North Carolina, 222 U. S. 380, and cases cited on page 394. There the North Carolina board of agriculture was granted wider authority than the Nebraska secretary of agriculture was given in the present instance. Neither was granted nor exercised purely legislative powers. In each instance the authority was administrative in its nature. Its use by the administrative department was essential to the complete and wise exercise of the powers of the legislative department of the state government. It resulted in constitutional cooperation between the legislative and executive branches.

[fol. 74] Plaintiffs assert that the act is indefinite and uncertain and alleges several specifications. If these have not been met by what we have already said in deciding that the act fixed the standards and the regulations merely forwarded them, we think what was further decided in Red "C" Oil Mfg. Co. v. Board of Agriculture of North Caro-

lina, supra, disposes of them: "Where one complains that regulations promulgated under legislative authority by a state board are unreasonable and oppressive, he should seek relief by applying to that board to modify them."

In their main brief the plaintiffs say: "No contention is made that the legislature is unable to fix minimum weights so long as minimum weights specified are reasonable, and that the law as passed is designed to prevent deception and fraud upon the public by means of short weights." A secondary purpose is to prevent unfair competition by dishonest bakers resulting in injury to the consuming public. Plaintiffs urge that the act is unreasonable and arbitrary because it prohibits a maximum weight in each size of standard loaf. The very provision against permitting excess of more than three ounces to the pound prevents short weight frauds. Neither the act itself nor the regulation prescribed by the Secertary of Agriculture requires wrapping, labelling or branding of loaves. Bakers may make as a pound loaf one perfectly legal but weighing 19 ounces and sell it as a substitute for the present twenty-ounce loaf which some of the plaintiffs greatly favor. It may or may not deceive the consumer accustomed to a [fols. 75 & 76] twenty-ounce loaf. Whether it deceive him or not, no action will lie because the loaf is within the tolerance provided by the act. But, if the baker make a loaf weighing 19½ ounces, a purchasing consumer may be actually and legally defrauded by believing it is one of the former twenty-ounce loaves. Or an undiscriminating purchaser may even be deceived into thinking it a pound and a half loaf. Thus, in a very practical way, it is demonstrated that the state attempts to prevent short weights by prohibiting excess tolerance or variation. That is the plain intent of the law.

We cannot cover in detail other particulars urged by appellants. We do not find them available to secure a reversal of the judgment of the district court. We are of the opinion that the act and regulations complained of are not violative of the state Constitution nor of the Fourteenth Amendment of the Constitution of the United States. The judgment of the district court is

Affirmed.

[fol. 77] [File endorsement omitted.]

[fol. 78] IN SUPREME COURT OF NEBRASKA

[Title omitted]

MOTION FOR REHEARING—Filed April 7, 1933

To the Honorable Chief Justice and Associate Justices of the Supreme Court of Nebraska:

Come now the appellants in the above entitled cause and respectfully move the Court for a rehearing and reconsid-
[fol. 79] eration thereof, because certain issues submitted to the Court and decisive of the case have been overlooked by the Court, and because the decision of the Court is in conflict with the 6th and 14th Amendments to the Constitution of the United States, and with the controlling decisions of the Courts in the following particulars, to wit:

1. In the Nebraska Bread Weight law and rules and regulations adopted pursuant thereto, the surplus or excess tolerances are arbitrary, discretionary and void; serve no useful purpose; are not necessary for the protection of purchasers against imposition and fraud; are not calculated to effectuate that purpose, and subject bakers and sellers of bread to restrictions which are unreasonable and arbitrary, and the said law and rules and regulations are therefore, a violation of the 14th Amendment to the Constitution of the United States.

2. The Court in holding that the surplus or excess tolerance are constitutional and valid is in conflict with the decision of the Supreme Court of the United States in the case of Jay Burns Baking Company vs. Bryan et al., 264 U. S. 504, and contrary to the decisions of the United States and State courts in controlling decisions thereon as follows:

Holsum Baking Company vs. Greene, 45 Fed. (2nd) 238.

P. F. Petersen Baking Co. vs. Weaver et al. (copy of opinion attached to appellant's original brief).

State vs. Curran, 220 Ala. 4, 6, 124 So. 909, 912.

State vs. Curran, 23 Ala. App. 275, 124 So. 911.

Quaker Baking Co vs. Herring et al. (opinion March 29, 1983, as yet unreported. Copy of relevant part as Exhibit "A" hereto).

[fol. 80] 3. The tolerance as fixed by the Deputy Secretary of Agriculture at the time of the institution of this suit and for months thereafter were one ounce per half pound loaf, two ounces per pound loaf and 10 per cent of all larger loaves of bread in excess of the specified minimum weights which tolerances were held unconstitutional by the Supreme Court of the United States in the Burns case.

4. The testimony of witnesses for both plaintiffs and defendants is that the tolerances fixed are inadequate and impossible of performance.

5. These impossible tolerances must be maintained for twelve hours after baking.

6. No provision is made in the law as to the place of weighing the bread or the number of loaves to be weighed.

7. The law attempts to establish a criminal offense but fails to define the obligations of bakers and sellers of bread with the degree of certainty required of criminal statutes and is therefore in violation of the 6th Amendment to the Constitution of the United States.

8. The act unlawfully attemps to delegate legislative authority.

9. The act arbitrarily prohibits the manufacture of a twenty ounce loaf of bread which is of greater demand than loaves of any other weight and that it is impossible to supplant the said twenty ounce loaf of bread with a nineteen ounce loaf as set forth in the court's decision without violating the excess tolerance provision of the rules of the Deputy Secretary of Agriculture.

10. That the act is a violation of the 6th and 14th Amendments to the Constitution of the United States.

For the foregoing reasons it is respectfully urged that [fols. 81 & 82] this petition for a rehearing be granted and that the case be reconsidered by the Court.

Respectfully submitted.

John C. Grover, Harold D. LeMar, Attorneys for Appellants.

[fols. 83 & 84] IN SUPREME COURT OF NEBRASKA

[Title omitted]

ORDER DENYING REHEARING—May 13, 1933

This cause coming on to be heard upon motion of appellants for a rehearing herein, was submitted to the court; upon due consideration whereof, the court finds no probable error in the judgment of this court heretofore entered herein. It is, therefore, considered, ordered and adjudged that said motion for rehearing be, and hereby is, overruled, and a rehearing herein is denied.

Charles A. Goss, Chief Justice.

[fols. 85 & 86] IN SUPREME COURT OF NEBRASKA

[Title omitted]

ORDER STAYING MANDATE—May 13, 1933

On motion of appellants for order withholding mandate herein, it is by the court ordered that mandate be ordered withheld pending appeal of this case to United States Supreme Court.

Charles A. Goss, Chief Justice.

[fol. 87] Ex. A. G. H. T.

IN SUPREME COURT OF THE UNITED STATES

[Title omitted]

PETITION FOR APPEAL, ASSIGNMENT OF ERRORS, AND PRAYER FOR REVERSAL—Filed June 1, 1933

Petition for Appeal

Considering themselves aggrieved by the final decision of the Supreme Court of the State of Nebraska, in the above entitled cause, the appellants (plaintiffs) therein, P. F.

Petersen Baking Company, Schulze Baking Company, Continental Baking Company, General Baking Company, Quaker Baking Company, Corporations, for themselves and others similarly situated, hereby pray that an appeal be allowed to the Supreme Court of the United States herein, and for an order fixing the amount of the appeal bond thereon; that the amount of the appeal bond be fixed for costs and also for supersedeas.

Assignment of Errors

And the Appellants (Plaintiffs) P. F. Petersen Baking Company, Schulze Baking Company, Continental Baking Company, General Baking Company, Quaker Baking Company, Corporations for themselves and others similarly situated, assign the following errors in the record and proceedings in the said cause:

1. That the Supreme Court of Nebraska erred in finding and holding that the maximum tolerance over the weights fixed by the statute, rules and regulations adopted there- [fol. 88] under, did not violate the due process and equal protection clauses of the Fourteenth Amendment to the Constitution of the United States, and in holding that said maximum tolerance served a useful purpose, was necessary for the protection of purchasers against imposition and fraud, was calculated to effectuate that purpose, and that it did not subject bakers and sellers of bread to restrictions which are unreasonable and arbitrary, and was not an improper exercise of the police power of the state.

2. That the Supreme Court of Nebraska erred in finding and holding that the unlimited power to prescribe excess tolerances, the time for weights must be maintained, and to define "fancy breads" vested by the statute in the Secretary of Agriculture, a ministerial officer, was reasonable and valid, and not contrary to the due process and equal protection clauses of the Fourteenth Amendment to the Constitution of the United States.

3. That the Supreme Court of Nebraska erred in finding and holding that the provisions of the statute and the rules and regulations adopted thereunder with respect to the time, place, possession and particular loaves of bread required to comply with the statute, the violation of any one

of which, irrespective of negligence, under the statute, would subject the appellants (plaintiffs) to a fine, is reasonable and valid and not an arbitrary restriction upon plaintiffs' right to do business, and not in violation of the due process and equal protection clauses of the Fourteenth Amendment to the Constitution of the United States.

4. That the Supreme Court of Nebraska erred in finding and holding that said statute and rules and regulations adopted thereunder providing tolerances which were impossible of performance, and requiring the maintenance of loaves of bread within this tolerance for an unreasonable length of time, was not unreasonable and arbitrary and in violation of the due process and equal protection clauses of the Fourteenth Amendment to the Constitution of the United States.

5. That the Supreme Court of Nebraska erred in finding and holding that the term "fancy breads" used in the statute, rules and regulations, which describes no known commodity, and the provisions of the statute prohibiting the manufacture (but not the sale) of loaves of bread dif-
[fols. 89-101] fering from the standard weights, and the failure of the statute, rules and regulations to define the crime of manufacturing over-weight bread, are sufficiently explicit to inform appellants (plaintiffs) what conditions will make them liable to the penalties of the statute and are not so vague that men of common intelligence must of necessity guess at their meaning but have the definiteness and certainty required of criminal statutes creating a new offense, and are not in violation of the due process and equal protection clauses of the Fourteenth Amendment to the Constitution of the United States.

6. That the Supreme Court of Nebraska erred in finding and holding that the statute, and the rules and regulations thereunder prohibiting the 20 ounce loaf of bread was a valid exercise of the police power of the state, and not an arbitrary and unreasonable restriction upon appellants' (plaintiffs') right to do business, violating the due process and equal protection clauses of the Fourteenth Amendment to the Constitution of the United States.

7. That the Supreme Court of Nebraska erred in finding and holding that the appellants (plaintiffs) were not en-

titled to the injunction prayed for in their petition under the provisions of the due process and equal protection clauses of the Fourteenth Amendment to the Constitution of the United States.

Prayer for Reversal

For which errors the Appellants (Plaintiffs), P. F. Petersen Baking Company, Schulze Baking Company, Continental Baking Company, General Baking Company, Quaker Baking Company, Corporations, for themselves and others similarly situated, pray that said judgment and decree of the Supreme Court of the State of Nebraska dated March 2, 1933 in the above entitled cause be reversed and a judgment be rendered in favor of said Appellants (Plaintiffs) and for costs.

P. F. Petersen Baking Company, Schulze Baking Company, Continental Baking Company, General Baking Company, Quaker Baking Company, Corporations, for Themselves and Others Similarly Situated, by John C. Grover, Harold D. LeMar, Counsel for Appellants (Plaintiffs).

[File endorsement omitted.]

[fols. 102-106] Ex. C. G. H. T.

In Supreme Court of the United States, October Term, 1933

No. —

P. F. Petersen Baking Company, Schulze Baking Company, Continental Baking Company, General Baking Company, Quaker Baking Company, Corporations, for Themselves and Others Similarly Situated, Appellants (Plaintiffs),

v.

Charles W. Bryan, as Governor of the State of Nebraska, and Dwight F. Felton, as Deputy Secretary of the Department of Agriculture of the State of Nebraska, Appellees (Defendants)

Order Allowing Appeal—Filed June 1, 1933

The Appellants (Plaintiffs) in the above entitled suit, and each of them, having prayed for the allowance of an

appeal in this cause to the Supreme Court of the United States from the judgment and decree made and entered in the above entitled suit by the Supreme Court of the State of Nebraska on the 2nd day of March, 1933, and from each and every part thereof, and having presented and filed their petition for appeal, assignment of errors, and prayer for reversal, and statement as to jurisdiction on appeal, pursuant to the statutes and the rules of the Supreme Court of the United States in such case made and provided;

It is now here ordered that an appeal be, and the same is hereby, allowed to the Supreme Court of the United States from the Supreme Court of the State of Nebraska in this cause, as provided by law, and it is further ordered that the Clerk of the Supreme Court of Nebraska shall prepare and certify a transcript of the record, proceedings, judgment and decree in this cause and transmit the same to the Supreme Court of the United States, so that he shall have the same in said Court within forty days of this date.

And it is further ordered that security for costs on appeal be fixed in the sum of One Thousand Dollars ($1,000.00), and that bond be given therefor, and that said bond when approved and filed shall serve as a supersedeas.

Charles A. Goss, Chief Justice of the Supreme Court of the State of Nebraska.

Dated June 1st, 1933.

[File endorsement omitted.]

[fols. 107-110] Supersedeas bond on appeal for $1,000.00, approved and filed June 1, 1933, omitted in printing.

[fols. 111-116] Citation in usual form, showing service on Charles W. Bryan and Dwight F. Felton, filed June 15, 1933, omitted in printing.

[fol. 117] Ex. F. G. H. T.

IN SUPREME COURT OF THE UNITED STATES

[Title omitted]

STIPULATION CONCERNING BILL OF EXCEPTIONS—Filed June 1, 1933

It is stipulated by and between the parties hereto, through their respective counsel, that the following consti-

tutes the bill of exceptions embodying all of the evidence that is necessary to present clearly the questions of law involved in the rulings to which exceptions are reserved, all as required by Rule 8 of the Rules of the Supreme Court of the United States.

John C. Grover, Harold D. LeMar, Counsel for Appellants. Paul F. Good, Attorney General, by Geo. W. Ayres, Assistant Attorney General, Counsel for Appellees.

[fols. 118 & 119] IN SUPREME COURT OF THE UNITED STATES

[Title omitted]

ORDER SETTLING BILL OF EXCEPTIONS—Filed June 1, 1933

STATE OF NEBRASKA, ss:

The attached bill of exceptions consisting of Volume 2, pages 1 to 407, inclusive, is allowed as such and is ordered made a part of the record herein.

Charles A. Goss, Chief Justice of the Supreme Court of Nebraska.

[File endorsement omitted.]

[fol. 120] Ex. G. G. H. T.

IN SUPREME COURT OF THE UNITED STATES

[Title omitted]

PRÆCIPE FOR TRANSCRIPT OF RECORD—Filed June 1, 1933

To the Honorable George Turner, Clerk of the Supreme Court of the State of Nebraska:

In the certified transcript of the record in the above entitled cause to be made and transmitted to the Supreme Court of the United States pursuant to an order allowing appeal dated June 1st, 1933, signed by the Honorable

Charles A. Goss, Chief Justice of the Supreme Court of Nebraska, kindly incorporate the following:

1. Record entry of filing of original petition.
2. Temporary restraining order.
3. Bond on temporary restraining order.
4. Record entry of notice of filing amended petition.
5. Amended petition.
6. Exhibit "A" attached to amended petition.
7. Exhibit "B" attached to amended petition.
8. Answer filed by defendants.
9. Exhibit "A" attached to answer.
10. Reply filed by plaintiffs.
11. Bill of exceptions and stipulation, and order.
12. Decree of District Court of Lancaster County, Nebraska.
13. Motion for new trial.
14. Order denying new trial.
15. Record entry showing filing of Præcipe in District Court.
16. Record entry showing filing of notice of appeal to Supreme Court of Nebraska.

[fols. 121–133] 17. Opinion of Supreme Court of Nebraska.

18. Decree of the Supreme Court of Nebraska on appeal.
19. Record entry of filing of motion for stay of mandate.
20. Motion for rehearing.
21. Record entry of order staying mandate.
22. Order overruling motion for rehearing.
23. Petition for appeal to the United States Supreme Court, Assignment of Errors, and Prayer for Reversal.
24. Appellants' Statement as to jurisdiction on appeal, pursuant to Rule 12 of the Supreme Court of the United States.
25. Order allowing appeal to the United States Supreme Court.
26. Supersedeas Bond on appeal and approval thereof.
27. Citation with return thereon.
28. This præcipe.
29. All journal entries in their proper order.

P. F. Petersen Baking Company, Schulze Baking Company, Continental Baking Company, General Baking Company, Quaker Baking Company, by John C. Grover, Harold D. LeMar, Counsel for Appellants (Plaintiffs).

Received copy of the foregoing Præcipe this 1st day of June, 1933.

Paul F. Good, Attorney General; Geo. W. Ayres, Assistant Attorney General, Counsel for Appellees.

[File endorsement omitted.]

[fol. 134] Clerk's certificate to foregoing transcript omitted in printing.

[fols. a–5] Be it remembered that on June 21, 1933, there was filed in the office of the Clerk of said Supreme Court of Nebraska a bill of exceptions reduced to narrative form from the original bill of exceptions filed in said office on March 30, 1932, stipulated to be the bill of exceptions embodying all the evidence that is necessary to present clearly the questions of law to which exceptions are reserved as required by the rules of the Supreme Court of the United States, and so allowed and ordered by the Supreme Court of Nebraska, which bill of exceptions is in the words and figures following, to wit:

[fol. 6] In District Court of Lancaster County, Nebraska

111-290

P. F. Peterson Baking Company, Schulze Baking Company, Continental Baking Company, General Baking Company, Quaker Baking Company, Corporations, for Themselves and Others Similarly Situated, Plaintiffs,

vs.

Charles W. Bryan, Governor of the State of Nebraska, and Dwight F. Felton, as Deputy Secretary of the Department of Agriculture for the State of Nebraska, Defendants

Bill of Exceptions—Filed June 21, 1933

Appearances

Messrs. John C. Grover and Harold D. LeMar appearing as attorneys for plaintiffs and Messrs. C. A. Sorenson,

Attorney General of the State of Nebraska, and R. R. Strehlow appearing as attorneys for defendants.

Lincoln, Nebraska, Mar. 22, 1932.

Received of the attorneys for the plaintiffs, for examination and amendment, the within draft of a Bill of Exceptions.

C. A. Sorensen, Attorneys for Defendants.

Lincoln, Nebraska, Mar. 22, 1932.

We herewith return the withwin Bill of Exceptions, heretofore submitted for examination and amendment, and propose no amendments thereto.

C. A. Sorensen, Attorneys for Defendants.

[fol. 7] CAPTION

Be it remembered that at the September, 1931, Term of the District Court of Lancaster County, Nebraska, to-wit: November 24, 1931, that being one of the days of said term, the cause of P. F. Petersen Baking Company et al., Plaintiffs, vs. Charles W. Bryan, Governor of the State of Nebraska, et al., Defendants, came on for hearing before Honorable J. H. Broady, one of the Judges of said court, and the plaintiffs and the defendants each to maintain the issues on their respective parts, adduced testimony and offered evidence, and all of said evidence and testimony, all of the objections thereto, with the grounds therefor, all of the rulings of the court on such objections, together with all of the exceptions to such rulings made and taken at the time having been by the plaintiffs herein reduced to writing in this their Bill of Exceptions, and said plaintiffs having served the same upon the Attorneys for the defendants for examination and amendment, as required by law, said plaintiffs now pray the court before whom said cause was tried that said Bill of Exceptions may be now settled, allowed, sealed and made a part of the record in said cause in said court.

[fol. 8] Mr. Le Mar: Plaintiffs offer in evidence the following evidence presented at the trial in the District Court of Lancaster County, Nebraska, of the cause wherein the

Hay Burns Baking Company, et al., were plaintiffs, and Charles W. Bryan as Governor of Nebraska, et al., were defendants, and which suit involved the constitutionality of the 1921 Nebraska Bread Weight Law, which reads as follows:

(Mr. LeMar here reads from the depositions filed herein on October 20, 1931, beginning at page 7 thereof, being page 33 of this Bill of Exceptions.)

The testimony of Dr. Harry Snyder beginning on page 9 of said depositions (page 35 of this Bill of Exceptions) was read to the court by Mr. LeMar for the plaintiffs.

Mr. Le Mar: I want particularly to call the court's attention to the Exhibit on page 88.

Recess.

STIPULATION AS TO CERTAIN FACTS

It is stipulated and agreed that the rules and regulations alleged in the petition, as issued by the Deputy Secretary of Agriculture, were in force and effect and the rules and regulations at the time of the filing of the petition.

It is stipulated and agreed by and between the parties that the rules and regulations set out in the answer of the defendants were adopted September 19, 1931, by the De-
[fol. 9] partment of Agriculture under the authority of House Roll No. 51, subject to the objection to the right of the Department of Agriculture to adopt these rules and regulations when an injunction is pending against them. A temporary restraining order was issued. And subject to the usual objection to such adoption.

OFFERS IN EVIDENCE

Mr. Le Mar: Plaintiffs offer in evidence the entire record of evidence on behalf of plaintiffs and defendants by stipulation heretofore filed in this court under date of October 20, 1931. (Mr. LeMar continues reading such testimony to the court.)

It now being 12:00 o'clock noon, the court took an adjournment until 2:00 o'clock P. M. the same day.

2:00 o'clock P. M. November 24, 1931.

Court met pursuant to adjournment and the following proceedings were had and done, to-wit:

(Reading of testimony filed in this court on October 20th, 1931, was continued by Mr. Le Mar.)

Mr. Le Mar: The next testimony is my own. I was not acting as attorney at that time. I think it should be disregarded under the circumstances. And that completes the testimony on the part of plaintiffs taken under the 1921 and 1927 Laws.

Plaintiffs rest.

[fol. 10] DEFENDANT'S CASE

Mr. Strehlow: Beginning with page 158 of the testimony filed in this court on October 20, 1931, defendants offer in evidence the testimony of William F. Cluett and of all witnesses appearing in said transcript thereafter.

Said testimony, beginning at 158 of said transcript (page 184 of this Bill of Exceptions) and continuing until the end of same, was read in evidence by Mr. Strehlow.

[fols. 11 & 12] November 25, 1931, 9:00 o'clock A. M.

Court met pursuant to adjournment and the following proceedings were had and done, to-wit:

Mr. Le Mar: Plaintiffs offer in evidence the depositions taken on behalf of plaintiffs on the 22nd day of September, 1931, in Omaha, Nebraska. Said depositions being a part of the record of evidence filed in this court in this case on October 20, 1931.

(Said depositions are read to the court by Mr. Le Mar.)
(Said depositions are found at pages 349-533 of this Bill of Exceptions.)

Plaintiffs rest.
Defendants rest.
Testimony closed.

[fol. 13] IN DISTRICT COURT OF LANCASTER COUNTY

[Title omitted]

STIPULATION AS TO CERTAIN EVIDENCE

It is stipulated and agreed by and between the parties to the above entitled suit, through their respective attorneys, that the evidence in the case of Jay Burns Baking Company, et al., plaintiffs, vs. Charles W. Bryan as Governor of the State of Nebraska, et al., defendants, from the transcript of record, case number 94 in the October term of the Supreme Court of the United States, and the evidence in the case of P. F. Petersen Baking Company, et al., plaintiffs, vs. Arthur J. Weaver as Governor of the State of Nebraska, et al., defendants, Equity Docket 261, Federal District Court of Nebraska, Lincoln Division, as contained in this transcript, as well as the depositions taken in this case, may be received in evidence in the case at bar, subject [fol. 14] to objection at the trial as to relevancy and materiality of the evidence offered, it being particularly agreed that the weight of the evidence taken in the two previous cases is to be considered in connection with the particular statute and the time when given as to its applicability to the case at bar.

John C. Grover, H. D. Le Mar, Attorneys for Plaintiffs. C. A. Sorensen, per R. R. S., Attorney General, State of Nebraska; R. R. Strehlow, Special Assistant Attorney General, Attorneys for Defendants.

[fol. 15] EVIDENCE PRESENTED IN THE CASE OF JAY BURNS BAKING COMPANY ET AL. VS. CHARLES W. BRYAN, AS GOVERNOR OF THE STATE OF NEBRASKA, ET AL.

The following evidence was presented at the trial in the District Court of Lancaster County, Nebraska, of the cause wherein the Jay Burns Baking Company, et al., were Plaintiffs and Charles W. Bryan as Governor of Nebraska, et al., were Defendants, and which suit involved the constitutionality of the 1921 Nebraska Bread Weight Law which was as follows:

"Sec. 7612. Department of Agriculture to Enforce.—It shall be the duty of the department of agriculture to enforce all provisions of this act. It shall make or cause to be made all necessary examinations and shall have authority to promulgate such rules and regulations as are necessary to promptly and effectively enforce the provisions of this act."

"Sec. 7613. Bread, Standards of Weight.—Every loaf of bread made or procured for the purpose of sale, sold, exposed or offered for sale in the State of Nebraska shall be the following weights avoirdupois, one-half pound, one pound, one and one-half pounds, and also in exact multiples of one pound and of no other weights. Every loaf of bread shall be made of pure flour and wholesome ingredi- [fol. 16] ents and shall be free from any injurious or deleterious substance. Whenever twin or multiple loaves are baked, the weights herein specified shall apply to each unit of the twin or multiple loaf."

"Sec. 7614. Tolerance, How Determined.—A tolerance at the rate of two ounces per pound in excess of the standard weights herein fixed shall be allowed and no more, provided, that the standard weights herein prescribed shall be determined by averaging the weight of not less than twenty-five loaves of any one unit and such average shall not be less than the minimum nor more than the maximum prescribed by this act. All weights shall be determined on the premises where bread is manufactured or baked and shall apply for a period of at least twenty-four hours after baking: Provided, that bread shipped into this state shall be weighed where sold or exposed for sale."

"Sec. 7615. Penalties for Violation.—Any person, firm or corporation violating any of the provisions of this act, shall be punished by a fine of not less than ten dollars nor more than one hundred dollars or by imprisonment in the county jail for not more than thirty days: Provided, however, that upon the second and all subsequent convictions for the violation of any of the provisions of this act such offender shall be punished by a fine of not less than fifty [fol. 17] dollars nor more than one hundred dollars, or by imprisonment in the county jail for not more than ninety days."

Dr. HARRY SNYDER, a witness in behalf of the plaintiffs, testified as follows:

I am chemist for the Russell-Miller Milling Company, Minneapolis and have been for thirteen years or more. My work for the past thirty-two years has been in connection with bread flour and food nutrition. During that time I carried on experiments to ascertain the digestibility and nutritive value of different kinds of bread for the United States Department of Agriculture Where I am now we have a well equipped laboratory and experimental bakery, run much the same as a commercial bakery.

I am familiar with the constituents of bread and its method of baking. Flour owes its bread-making characteristics to gluten, which is the body, or substance resulting from the mixture of flour with water, forming dough. No other cereal than wheat contains such material in quantity as wheat flour. In bread making water is necessary, the amount being governed by the kind of flour used. In the low gluten flour a minimum of water is required and in the high gluten flour more water is required. Gluten is the material which gives the bread-making value and is [fol. 18] included in the term protein. So flours which have the largest amount of gluten make the best bread or that which has the highest food value. Low gluten flours are of the starchy kind and have a much lower food value. The weight of a loaf of bread depends in large degree upon the character of the ingredients used. The more water there is in dough, the greater the evaporation, and the greater the variation in weight between the dough and the finished product. In making bread from a high gluten flour, the baker must use about 60% of water in mixing the dough. The baker does not know of the moisture content in flour as it varies with quality and conditions in the place where the flour is kept.

Low gluten flour, or low quality flour, does not take the high absorption of water and a poorer quality of bread results than from the high gluten or better grades of flour. The best flour requires more water than the poorer grades of flour.

By 60% of water I mean 60 pounds of water to the 100 pounds of flour in the dough. In baking bread there is a

number of uncontrollable elements. On account of the gas and moisture in the dough, the baker cannot weigh the wet mass of dough with accuracy to insure a loaf of bread of a given weight; and no two pieces of dough are exactly alike owing to the errors arising in handling it, evaporation of moisture and gas. Flour making has been practically the [fol. 19] same since about 1880.

Other factors entering into the evaporation from a loaf of bread are the size and shape of the loaf, the duration of the baking, and the temperature of the oven. The strong or the better grades of flour used in making the best bread hold a greater proportion of water than the lower grades. Wheat flour is in a class by itself and so bread is unique. It comprises 50% of the family dietary.

It thus necessarily follows and is a fact that the best bread, that is, bread made from the best flour, contains more moisture when it is baked than does bread baked from a poor quality of flour, and hence the best quality of bread will have more moisture evaporated from it than will the poorer quality of bread as the latter has less moisture to start with. The best bread will dry out more and faster than the poorer quality of bread. After a loaf of bread is baked it is only the water which is evaporated which thus makes a change in the weight of the loaf, but there is no difference in the food value of the loaf. It is the same food value after evaporation as it was before the evaporation. The only difference in weight is the moisture content of the loaf, and a loaf of bread weighing only 15½ ounces is of the same nutritive value as when it weighed 19 ounces.

Bread made from a poor or starchy flour has less protein [fol. 20] in it than is contained in good bread made from good flour, and thus in the consumption of the poorer quality of bread, some other food, such as eggs or meat having high protein content must be used to obtain a sufficient amount of protein. In fact a loaf of bread of low protein content would require an egg or an egg and a half to raise it to the level of protein content in the loaf made from good flour or flour of high gluten content, and which has the greater quantity of moisture in it. In other words, the poor- quality of bread will not furnish the requisite amount of nutritive material and so must be supplemented with more expensive food, and besides the poorer quality of bread is less appetizing, and the family using the poorer

quality of bread thus eats less bread than would otherwise be consumed, and in turn eats more of other and more expensive food materials, and thus the cost of living is increased because of the low consumption of a poor quality of bread. The other and more expensive foods are necessary to obtain the necessary quantity of protein in order to have a well balanced ration. The consumer must get the necessary quantity of protein, and if he does not get it from bread he must get it from other and more expensive foods. A good quality of bread supplies more than any other food, the best quality nutrients and at less expense.

Wheat varies from year to year in its gluten content owing to soil and climatic conditions, and this fact is [fol. 21] recognized by the millers in buying wheat from different parts of the country.

The demand today is for the best quality of bread, that is, bread made from high gluten flour, and the public is right, because such bread is more digestible than the poorer quality. Poor bread does not arouse the digestive organs and so is not digested without additional expenditure of energy in the body, and so poor breads are not digested with the full degree of ease, comfort and satisfaction as are breads made from the best flour. In other words, poor bread is a greater tax on the human system in its consumption than is good bread.

In the experiments which I made it was found that a loaf of bread weighing 18 ounces when it came from the oven would lose in moisture content about 2 1/5 ounces. That was the average. Many of the loaves exceed that.

From the experiments made and the results obtained it is not possible for a baker to make bread at all times and under all climatic conditions and have a loaf of bread which will weigh just out of the oven not to exceed 18 ounces and which in the 24 hour period following will not lose more than two ounces. That might be done on certain days, but there are days when it is absolutely impossible to make bread to conform to both the maximum and the minimum weight during the 24 hour period after baking. The two [fol. 22] controlling factors are temperature and humidity and these vary from day to day in different parts of the country. On some days the humidity approaches saturation, which means 80% or 90%, and then on hot, dry days, the nature of bread is such that it will dry out more than

two ounces to the pound within 24 hours after baking. The conditions of humidity and temperature change during the day so that the baker starting to make bread and not knowing definitely his oven conditions, who puts in enough dough to have a legal loaf at the end of the 24 hour period may have a loaf coming out of the oven in excess of the maximum weight, because the loaf in baking has not lost as much moisture as was anticipated. There is no nutritive value in what is lost, namely: the moisture.

In the course of a few hours the loaf might soon become a legal loaf not exceeding 18 ounces in weight, but before the close of the 24 hour period, on account of the evaporation of the moisture, the loaf might then become illegal by being under weight, that is, the pound loaf may weigh less than 16 ounces, although the baker used every effort to make the loaf legal. The law under consideration makes a criminal of a baker for deviations in weight which are absolutely beyond the baker's control.

What I have said applies to 25 loaves as well as to one loaf, and the average of the 25 would be just about the [fol. 23] same as the weight of the one loaf and that might be true of any number of loaves passing through the same conditions of temperature and humidity. The tendency of the loaves is to become equalized as they give off the moisture, and the surrounding atmosphere takes it up after the loaves leave the oven.

In the United States Food Law it is provided in the regulations that discrepancies in weight or measure, due exclusively to differences in atmospheric conditions in various places and which unavoidably result from the ordinary and customary exposure of the packages to evaporation or to the absorption of water, shall not be considered, but are allowable tolerations and are not a violation of the law; that is to say, if a loaf of bread is a legal loaf when it leaves the oven, it makes no difference under the Federal Law, how many ounces it loses in weight after that time, because climatic conditions are beyond the control of the baker. In the law, bread as such is not specified, but the law applies to all food-stuffs.

The present tendency is to improve the quality of farm products, and if a law is such as to discourage the use of the best article such as wheat, then that article has a more limited market. So a law that would discriminate

against the production and use of the best flour would discourage the production of the best wheat, and the farmer [fol. 24] would have more encouragement to raise a poorer quality of grain. The baker would come nearer to complying with the law by making bread from poor flour of low absorption, but even with such flour there would come days and times when even bread made from such would not comply with the law. I can see no way by which the baker can comply with the law having both a minimum and a maximum weight by the use of either poor flour or the best flour, though everything will be done on his part naturally to lessen variation in weight in the 24 hour period after baking. But I know of no way that would be successful in making a loaf of bread that would at all times and under all conditions comply with the maximum and minimum weight law.

The reason why the bakers will use the poorer qualities of flour is because there is less moisture therein consequently less evaporation from the bread after it is baked. The poorer flours make bread which has a less evaporation of moisture in a given time than better flours. In my experiments, made in July and August, the loaves were weighed as soon as cool enough and were again weighed at the end of the 24 hour period. The experiments were made under normal conditions and as near as possible to the actual conditions of handling bread that exist in the bakery [fol. 25] and the store. We usually made 25 loaves or so in each batch, making duplicate tests and the average weights were determined by weighing the 25 loaves. We used in the tests the strong gluten, or high absorption flour such as is used in bread making, that being the best quality of flour, and which is always higher in price, of course, than the poorer qualities. The high gluten flour commands a better price, and the price paid depends upon the abundance, or otherwise, of the best quality of wheat. There is a difference at times of $1.00 a barrel between the best wheat flour and the poorer grade or starchy flour, so that the baker of the poorer quality of bread makes a greater profit if the bread be sold at the same price. The public demand is for the best bread because it is moist and is more satisfying than the poorer bread. As said by Dr. Taylor, chief advisor to Mr. Hoover during the war:

"If a bread does not look like good bread, keep like good bread, or taste like good bread, and in addition does not

agree (with the consumer) as does good bread, the sentiment of the people turns against it."

Dr. Taylor is a recognized authority on bread and was a government expert during the war.

The trade generally, both millers and bakers, accept such government publications to which I have referred as being [fol. 26] authoritative. I have written several books concerning foods and their nutritive value which books are used as text books throughout the country.

A stiff dough is one used with a low amount of water, and a slack dough is one with much water. A characteristic of good flour is that while the dough is slack when the process of bread-making is started, yet in the process the dough gets stiffer because of the physical and chemical changes taking place.

Protein is the most valuable ingredient in bread, and the introduction of starch reduces the quality of protein. Starch is indigestible and if a wheat loaf of bread has 20% of starch in it, then 20% of the value of the flour in its protein content is lost. Chemical changes are taking place not only in the dough but also in the baking process of the bread.

Dr. Harry Snyder

Cross-examination:

I did not do the baking in the experiments, but I was present with my expert bakers. We were not attempting to obtain any specific results, but just to determine the natural loss which would occur when bread was made in the natural and normal way and left exposed in a show case for a period of 24 hours. The bread was not wrapped. We made a straight dough such as is made in a bakers. We did not make the experiments to be used in the trial [fol. 27] of any law suit, but to give information on the subject to the National Bakers' Association on the loss in weight of bread during the 24 hours after baking. We were not attempting to comply with the provisions of any special law, but were simply making bread as it would be made in the ordinary course of events without any effort going to either extreme. We were not seeking to determine whether we could bake merchantable bread within the tolerance of 2 ounces to the pound, but we obtained the data

which answers that question. The dough was so scaled as to bake a loaf weighing around 18 ounces when first weighed, being about 20 ounces of dough. What I was trying to determine in the experiments was the shrinkage on bread during the 24 hour period after baking. The results were not used in any law suit. It was purely a scientific investigation. I have not testified in any law suit about this matter heretofore. When I made the tests I did not have in mind whether or not I could comply with any law as to maximum and minimum weights. I would not attempt to say whether or not I could comply within the provisions of the maximum and minimum weight law. Whenever there is an increase in the amount of gluten, there is a proportionate decrease in the amount of starch, and variations in other ingredients would have something to do with the absorption of moisture. Many bakers take into consideration the gluten and starch contents in the [fol. 28] flour and find that flours of certain types give them the bread they want. It is the duty of a chemist to determine the elements in the flour. Usually a baker gets a uniform flour from a certain mill, and the same grade of flour from another mill might be appreciably different. Bakers as a rule do not make tests of the gluten in flour, but get their knowledge of the flour almost exclusively in the way that the flour works in the process of breadmaking and in the quality of bread it produces. Absorption of water is a great factor.

Bread is quite variable in its composition depending upon the quality of flour and on the method of baking. In our tests we used simply the ordinary straight dough process of manufacture. If the process of bread-making is varied too much, then the right quality of bread is not produced. If too much dough is scaled, or the oven is a little slow, there would be an excess weight loaf which would be illegal at the start of the 24 hour period. The heat of the oven cannot be regulated to a point where the bread can be turned out with such uniformity in its moisture content as to get away from the factor of overweight bread when fresh. But if you should get away from that factor, then you get caught on the other end by having a light weight loaf during the 24 hour period after baking. Our bread was baked at between 450 and 500 degrees Fahrenheit. The dough had a 60 per cent absorption of moisture in the

[fol. 29] flour the bakings being around 40 minutes. We cannot tell how much moisture is lost in the baking process, except approximately. We were not trying to produce a loaf which would weigh not less than 16 ounces, nor exceed 18 ounces, as that would not have been an experiment, as experiments are made under conditions that are known and are applied to the specific question under investigation. Our experiment was undertaken to determine what the loss in weight would be of bread as ordinarily made with high quality of flour without excess moisture in the dough and as a baker would bake bread in the ordinary commercial practice. We made no attempt to get any particular result. If we had changed the consistency of the dough we could not have obtained the quality of bread desired. A scientist doesn't start out with a fixed idea that he is going to prove something. I have never tried to make a bread which would come within the minimum of 16 ounces to the pound and not exceed a maximum of 18 ounces to the pound, but I do not think it would be good bread. I do not say it is impossible, but I think you would not get a product that you would really call bread. If you should get the absorption in the flour and the dough, you would have a very dry and an inferior loaf. Water is necessary in bread-making and at least 55 per cent of water must be used even with the poorest dough, so that under certain climatic conditions breads made from pure flours [fol. 30] will not pass the maximum and minimum test. The humidity and the temperature vary much, and affect the dough mixture before it goes into the oven. They are uncontrollable conditions. The mechanical losses in the handling of the dough are quite appreciable. Dough scaled at 20 ounces for each loaf might produce loaves varying in weight quite appreciably. Under the best conditions there is a 3% loss in the dough. Bread is still moist when it leaves the oven.

I have heard of a product called Badex which it is claimed will keep the moisture in the bread, but I cannot see how any material can do that. Badex is of a starchy nature and starchy content in the bread makes the bread of lower food value.

Flour with much starch requires less water for the making of the loaf of bread as starchy flours require less moisture as they have not the quality of gluten which calls for

additional moisture in making the best bread, and bread made from starchy flours has a less evaporation during a given time. In baking, the heat must penetrate the mass of dough and bring about the chemical and physical changes which are necessary to finish the bread-baking process.

When a loaf of bread becomes dryer than the surrounding air it will absorb moisture. The crust on a loaf of bread is a factor in controlling or retarding evaporation. Waxed paper will, I presume, retard evaporation, but many [fol. 31] breads are not susceptible of wrapping. There is an uncontrollable shrinkage in the 18 ounce loaf of bread of 12.1% in the 24 hour period after baking. In the dough process there is 6% of uncontrollable shrinkage. There would be a 6% uncontrollable error from the 18 ounce loaf. I do not think it would be any easier to comply with the law with rye and graham flours. Evaporation takes place more readily in the coarser material, but the process of bread-making is the same. Chiefly water is lost in the drying of bread. There are gases which are negligible in the individual loaf. There are some 7,000 mills making flour in the United States and a general statement covering these flours cannot be made as each flour must stand on its own merits.

When bread comes from the oven there is 35% or 40% of moisture left in it, depending upon the method of baking and other factors. I haven't made a test for the express purpose of determining whether or not I can bake a loaf of bread to weigh not less than 16, nor more than 18 ounces within the 24 hour period, but the tests which I have made cover that point thoroughly without starting with that point in view.

There is as much gluten in the lower grade, or poor flours, but it does not have the good bread-making qualities. The gluten in the poor flour does not produce as light, porous [fol. 32] and satisfacory a loaf as the higher grade flour. The gluten in the poorer flour while ample in amount, is deficient in its good bread-making qualities. The poor flour is sold cheaper than the high grade or patent flour. The gluten in the poor flour does not produce the expansion, quality, taste, and all of those factors which go with good bread, though there may be the same proportion of gluten in the poor, or clear flour as in the patent or high grade flour. The poor flours are so called because of their poor

bread-making qualities, that is to say, they cannot be made up into an appetizing food product as compared with bread made from the good flours. I do not think bread can be made from a 40% absorption dough, as there would not be enough water to make a dough. A baker, under the Smith Bread Law, might go along for twenty or twenty-five days and be all right, then there would be five or ten days when the bread would not comply with the law. The two ounce to the pound tolerance is not a sufficient variation to cover what we know will take place under extreme conditions. A loaf of bread weighing 18 ounces out of the oven depends for its evaporation upon the humidity and temperature in the room where it is kept for the 24 hours thereafter, and if the humidity and temperature could be controlled, that would tend to lessen the loss of moisture in the bread. In the maximum and minimum weight loaf law, [fol. 33] if the baker attempts to avoid one end he is caught on the other end, and while he might be all right on one 25 loaf batch, he might be caught on the next batch. The law of averages will show that the second batch might not have the same combination and that would throw it out. Loaves cannot be obtained of the same weight. The dough itself as it goes into the oven varies in weight even with the greatest care the baker can bestow. There are conditions where bread will shrink the most in the first twelve hours and then there are other conditions where the shrinkage would be greatest in the last twelve hours, because of the constant change in temperature. If the temperature could be maintained at the same degree for the 24 hours then the shrinkage would just be the normal drying for that temperature and that humidity. A baker can control the humidity and the temperature of his dough room and of his baking room, that is, in the big plants, but when the bread leaves the oven it is no longer under control. The inequality of the law arises in the fact that there is not enough leeway between the weight when baked and the weight 24 hours thereafter, because of the uncontrollable factors in the drying process.

Tests conducted under my supervision were made by one of our expert bakers "with the observation as to the con- [fol. 34] ditions which he as a bread maker should determine would give the best quality of bread." We are not attempting to obtain specific results "other than to deter-

mine the natural loss which would occur when bread was made in the natural and normal way and left exposed in a show case for a period of 24 hours." The bread was not wrapped. At the time I made the tests I did not have in mind whether or not we could comply with any law as to fixing the maximum and minimum weights. That was not the object. The object was to get the data of the shrinkage. I wouldn't attempt to say whether or not we could come within the provisions of such a law, My tests were simply "an experiment that was undertaken to determine what the loss in weight would be of bread as ordinarily and usually made, as made with high quality of flour without excess moisture in doughing and as a baker would make in the ordinary commercial practice. I wasn't trying to secure any particular result. "I think you can make something but you can't call it good bread. You can make a product which might suggest bread, but it would not be real bread." I have never tried to make such a product as to come within the minimum of 16 ounces and the maximum of 18 ounces. Wax paper retards evaporation. I never made a test for the express purpose of determining whether or not you can bake a loaf of bread to weigh not less than 16, nor greater than 18 ounces within the 24 hour period. I haven't [fol. 35] started that with a view of making a specific test for that point, but the tests which I have made cover that point thoroughly without starting with that point in view. I understand the law to require the bread not to at any time exceed 18 ounces and at no time during 24 hours to weigh less than 16 ounces—a maximum and a minimum on an average of 25 loaves, but do not understand that some loaves can be down as low as 14 ounces and some up to 19 ounces, because "while you might have to take into consideration a number of loaves—but getting the average wouldn't cover the spread, 25 loaves, if you weighed them up would behave just like one loaf would behave, when you started if the one loaf was an ounce or more heavier when you started, it would be that much proportionately lower, and while it would pass the law on the low end, it would violate the law on the high end". If 12 of the loaves weighed 15 ounces at the end of the 24 hours, and 12 of them 17 ounces, and one exactly one pound, they would come within the law "but the baker could not make loaves in that way, because assuming as he began to make the

loaves of that varying and lack of uniformity in the weight — the 25 loaves, he would have from 14 to 19 ounces, that is 5 ounces variation and he would have no control of his work, he couldn't tell where he was landing to make bread, even now he wants to divide his dough and wants to make [fol. 36] those individual loaves just as near uniform as he can". Assuming you could have the exact weight of the dough when put into the oven—that each loaf weighed exactly the same—I could expect one-half ounce variation between loaves when taken out of the oven. I found that in my experimental work, but whether larger differences than that might occur, I am not familiar with, but I think that might occur in practice where the bread is handled in quantities. You might get a little piece of dough that would stick to one of the loaves and go to the next, and while the two might average, there would be a difference between them.

JAY BURNS

Direct examination:

Flour, which is the principal ingredient used in making bread, contains starch and in the baking process the starch cells must be ruptured because unruptured cells are indigestible. When the dough is put in the oven from 85 to 90 per cent of the starch cells are unruptured, but become ruptured in the oven by the heat and the moisture, and as they rupture they drink up great quantities of water in the dough so that the flour, and consequently, the dough, must have the maximum of water to rupture the maximum of starch cells; and if starch cells in bread are not rup- [fol. 37] tured, then to that extent is the bread indigestible, for the starch cells pass through the body unruptured or they ferment in the intestines and cause trouble. Starch cells cannot be assimilated unless they are ruptured. Heat alone will not rupture starch cells, but only in conjunction with moisture, and the more water in the dough, the better the bread. The modern machine dough mixer is so constructed as to incorporate as much water as the dough will hold and thus the maximum amount of starch cells are ruptured in the baking process and so the best bread product results. The loaf containing the most moisture has

the least unruptured starch cells and is consequently the most nutritious.

The public demand is for the best sanitary conditions and hence the greatest quantity of bread consumed is baked from machine mixed dough which machines are very expensive; and too much water in the dough makes it spread and adhere to the machines and gum them so that the dough can only be of a certain consistency, that is, can only contain a certain percentage of water. There is no way known to the baking trade to overcome this condition. The dough must be thick enough to hold its shape and so be scaled and inserted in the oven. Both flour and dough are made to carry the maximum of water so as to get the best bread both as to digestibility and palatability. The greater [fol. 38] the quantity of water in the dough the greater the quantity in the baked loaf, and the greater the evaporation of moisture from the loaf during a twenty-four hour period after baking.

Under the Smith Bread Law, a greater quantity of dough with high moisture content must be put in the oven to get a given weight loaf than is required of dough with low moisture content, because the better loaf will contain more moisture and will evaporate more and faster than will the poorer quality loaf made from dough with a low moisture content, and there will be much greater chance for an illegal loaf of good bread than there will be for an illegal loaf of poor quality bread, as the latter will not evaporate as much moisture in a 24-hour period after baking as will the former. The better the quality of the bread, the greater is the shrinkage, or the evaporation of moisture during 24 hours after baking. So that the Smith Bread Law will of necessity, force the bakers to use a poorer grade of flour having less moisture content and poored quality gluten, in order to produce a loaf of bread having a minimum evaporation of moisture after baking and for 24 hours; and the quality of the bread will thus deteriorate, as many starch cells will be unruptured and these are detrimental to the stomach.

While the machines for mixing dough are very expensive, they produce the best quality of bread, which bread, though lighter in weight according to the tables in evidence, sells [fol. 39] for more money than the poorer quality of bread which is heavier.

The three wholesale bakers in Omaha make approximately 75% of the bread consumed and they make smaller loaves, but get higher prices for their product than do the smaller bakers of the other 25% of the bread consumed. The latter loaves, however, give the dealer the greatest profit as they do not cost the dealer as much as the former. The value of the loaf is determined almost entirely by the character of the gluten in the flour and the development of the dough in the process of manufacture.

There is no other article of food in the same class with bread, but crackers, various breakfast foods, cereals, macaroni, spaghetti, and other products of wheat and grains are used in place of bread. None of these are required by law to be sold at a fixed weight. They are all practically sold in packages marked with their minimum weight. All other goods are marked with their minimum weight, but not their maximum weight.

Cross-examination:

The percentage of evaporation in the oven does not depend solely upon the percent of water in the dough. The amount of water hasn't anything to do with the time of baking, and the more water in the loaf, the shorter time it will take it to bake, because it is better developed and the [fol. 40] heat will penetrate more rapidly. About 85% of bread consumed is sold in single loaf lots.

Redirect examination:

Loaves vary in weight and cannot be baked to weigh the same. Consumers do not buy in quantity because they want it fresh and can get it every day. Many shipments of bread are made in less than 25 loaves of one unit, that is, of the same weight or size. That is true generally of the bakers. A great deal of bread is shipped into Nebraska from the surrounding States, and it is customary for a bread dealer to handle two sizes of bread and get frequent shipments containing less than 25 loaves of one size, and this is because the dealer wants to sell, and the public wants to buy, only fresh bread.

Recross-examination:

Our average shipments per day are 40 loaves containing one or more sizes.

Redirect examination:

There is no way to moisten the cooling or dough room, except by installing a humidifying system. Out of 30,000 bakeries in the United States, there are about 50 plants with humidified dough rooms equipped with machines to help control the humidity. The machines are expensive to buy and the rooms for them are expensive to build and maintain. They are used nowhere except in the dough [fol. 41] room where fermentation takes place, as humidity is an important factor in fermentation. There are two humidifiers in Nebraska and approximately 500 bakeries. It is not practical to have a controlled cooling room after the bread is baked, as it is taken in wagons for distribution and is kept for sale in stores. To control the evaporation the bread would have to be kept in a humidified room for 24 hours after baking, and that would be neither practicable nor profitable. For years the bakeries have been trying to find a means of handling dough through the machines so as to retain the maximum quantity of water necessary to develop all food values of the flour, but up to date a perfect system has not been devised. The greater the moisture in the loaf when baked, the greater will be the percentage of evaporation after baking. The reason why water is desired in the baking of a loaf of bread is that the water permits the development of a larger percentage of the food elements in the flour, and if there has been sufficient moisture in the dough and in the loaf to properly develop the food elements, then the evaporation from the loaf after it is baked does not affect its food value at all.

That is the reason why the difference in weight in the loaves made from the same unit of dough does not create any difference whatever in the food value of the loaves, as all the loaves of one unit of dough are of the same food [fol. 42] value irrespective of the moisture evaported after baking. A difference in moisture content in the dough makes a difference in the resulting bread, as the bread baked from the dough containing the highest moisture content will have a greater food value than the loaf baked from dough containing a lower moisture content, and the better loaf will evaporate more rapidly than the poorer one, though it does not lose its food value. Bread made from graham flour and whole wheat flour will dry out more quickly than loaves made from the patent flour, hence in

the 24 hour period after baking the graham loaves and whole wheat loaves will evaporate more and faster than will the patent flour loaves.

At the beginning of the war, the U. S. Government Food Administration required standard weights of bread of ¾ pound, one pound, 1½ pounds, and multiples of one pound, and all made from one grade of flour, and the formula from which bread was made was also prescribed, so that every baker in the United States was compelled to use the same kind of flour and to make bread from the same formula, and so there was present all of the elements of control necessary in the operation of a standard weight regulation. Such regulations by the U. S. Government were abrogated shortly after the armistice; and later, owing to the Government wheat guarantee to the farmers, the head of the U. S. Grain Corporation, Julius Barnes, made an investigation with reference to bread and as a result the [fol. 43] bakers were required to reflect a fluctuation in the price of flour and ingredients by making a variation in the weight of the loaf of the bread, rather than by changing the selling price of the loaf, and that has been the practice of the bakers throughout the country up to this time, and was the practice prior thereto. This practice cannot be continued under the Smith Bread Law. At the present time any flour mill might make 40 or 50 different grades of flour, and it is not possible to say how many grades or qualities of flour there are now made, from which bread is or may be baked.

Recross-examination:

On a decrease in the price of the ingredients the size of the loaf is increased so as to leave the selling price the same.

Redirect examination:

Doughs mixed by modern machinery develop tbe gluten content of the flour to a higher degree than it is possible to develop it by hand mixing. In addition to the 13 elements of uncertainty enumerated by Mr. Pirrie, there is the human element with which we have to contend in a bakery and which is very uncertain. There is no scheme whereby absolute accuracy can be obtained from employes,

hence this is as great an uncontrollable factor as any of the others mentioned. An employe might easily over-scale, or under-scale dough, and thus produce batches of bread absolutely in violation of any standard weight law. [fol. 44] The experiments by Mr. Jarnagen were made under my supervision. Eighty-one experiments were made in September, 1921, which was a normal month as to humidity and temperature, warmer than January and cooler than July, but probably a fair average. Temperature varies very greatly in Nebraska throughout the year. We baked 1,224 loaves in making the experiments. The dough was scaled so as to produce as nearly as possible a pound loaf which would weigh 18 ounces when baked under normal conditions, 36 tests being made with four loaves each, 45 tests of 24 loaves each, and 54 tests with one-pound loaves, and 27 tests of half-pound loaves. Thirty-three tests with one pound loaves showed a loss of moisture in the 24 hour period after baking of more than 2 ounces, and 9 tests showed a loss of just 2 ounces, and 12 tests showed a loss of less than 2 ounces. In the half pound loaves 22 tests showed more than one ounce loss of moisture in the 24 hour period, and one showed just 1 ounce loss, and 4 showed a loss of less than 1 ounce. The maximum shrinkage on the one pound loaves in the 24 hour period was 2¾ ounces, and the minimum loss one ounce. In the half pound loaves the maximum loss was 1¾ ounces, and the minimum loss ½ ounce. The tests were all made under normal conditions and no special effort was made to create humidity or temperature conditions. The result of the experiments would have been the same if a greater number of loaves had been [fol. 45] baked in each batch. Under the Smith Bread Law, owing to the impossibility of controlling the factors entering into bread, loaves will at times necessarily be illegal and we and our employes will be subject to arrest, and that in turn will affect our business and cause us immense damage. We would have the same result as we had once before, when an attempt was made to enforce a law which later the court declared invalid. Every baker will suffer under the Smith Bread Law because of the impossibility of complying with it. About 100,000 barrels of flour per month is used in Nebraska for making bread, and under the Smith Bread Law a reduction of $1.00 per barrel would not give

any benefit to the bread consumer as that would represent only one-third of a cent a loaf and there are no units less than one cent, and the same is true on the reduction in price of $2.00 a barrel. There must be a reduction of $3.00 per barrel before the price of the bread can be reduced one cent so that until there is a reduction of $3.00 per barrel of flour, the bakers will make an extra profit under the Smith Bread Law which cannot be passed on to the consuming public. On an increase in the price of flour of $1.00 a barrel, the baker, to save himself from loss, would have to increase the price of a loaf one cent, there being no smaller units of price, although the increase in the cost would only be one-third of a cent. And thus the bakers would make an abnormal profit at the expense of the consuming public. On an increase in the price of the ingredients entering into a [fol. 46] loaf of bread, the price of the loaf must be increased, or the quality of the bread must be reduced correspondingly, and if the latter course is pursued, then the bread consuming public is not getting the food value which it ought to get.

Starch is used to reduce the cost of bread because pure starch only costs about one-half that of wheat flour, but with 20% of starch in the loaf the consuming public would scarcely know the difference, although 20% of starch in flour would give the baker a very much larger profit.

Another uncertain element is the non-continuous use of ovens. During the baking process the heat is drawn off very rapidly into the loaves of bread, but when the baking ceases and the oven is shut up the temperature will be materially increased and thus the first batch of bread inserted thereafter will be baked more rapidly and in a shorter time, and less moisture will be evaporated in the baking process, and so the loaves would contain more moisture when baked, and thus be subject to greater evaporation during the 24 hour period after baking. Railroad companies and restaurants require special sizes of loaves and specially shaped loaves which we could not make under the Smith Bread Law, and as the restaurants and railroads will not take other shapes and sizes, Nebraska bakers will lose all of such railroad and restaurant trade because the railroads and restaurants will buy from bakers in the surrounding [fol. 47] states. That trade is quite extensive and is valuable.

The retail baker sells only to the patrons who come to his store, while the wholesale baker distributes his bread to the dealers. Compliance with the Smith Bread Law will eliminate our trade in outside states as we will not be able to compete with the bakers in those states making different sized loaves. It is not practicable to makes loaves under the Smith Bread Law, and also make other sized loaves for sale in the surrounding states, and the Jay Burns Baking Company would, under the Smith Bread Law, have a loss of 20% of its business which is done in surrounding territory.

The ¾ pound loaf provided for by the U. S. Food Administration regulations was in response to a demand for a smaller loaf than the one pound loaf. It would be impossible as a practical proposition to humidify an entire baking plant. The rooms where the bread is cooled are large and provided with ventilation, and the bread is taken out at frequent intervals to be loaded into delivery wagons, and is brought in at frequent intervals from the baking room. It would be practically impossible to keep any such room from the external air, and it would be a prohibitive expense to attempt to control the humidity and the temperature in a room so open to the general atmosphere, and besides that, it is absolutely necessary to have circulation, as otherwise the bread would suffer, because a constant circulation of air carries off the gases which are given off by the bread in the cooling process. Both gas and [fol. 48] moisture are given off from bread after it is baked.

Bread in the larger bakeries is kept in the plant from 3 to 18 hours after baking. The average would be perhaps more than 12 hours. Deliveries with 3 or 4 hours are made in response to emergency calls from the trade and are not regular marketing. It is not possible in a large bakery to market all of the bread baked within a few hours after baking, whereas the retail bakers making small batches of 100 or 200 loaves two or three times a day sell their bread over the counter to patrons who call therefor. The large bakeries have no such trade. The large or wholesale bakeries, of necessity, are obliged to keep their bread on hand for a much longer period than does the retail baker.

If the bakers were able to make a bread which would for the 24 hour period be within the limits of the Smith Bread Law, then from my knowledge of such a product, I know

it would not be salable. The bakers could not possibly make an article to conform to the requirements of the Smith Bread Law which will have the consistency and appearance and quality of the bread which is now being made and which is now demanded by the public, and I have made a special and exhaustive study of bread for the last ten years. I am on the executive committee of the National Bakers Association which is trying constantly to improve the conditions in bakeries and the quality of the bread [fol. 49] baked.

I know of no method whereby bakers can produce the bread which is made for the market today, and know beforehand that 25 loaves of any one size would always, within a 24 hour period, average not less than 16 ounces, nor more than 18 ounces to the pound. I would say from my experience that it is an utter impossibility, and if it were possible to change the character of the bread and comply with the law, then there would be an unmarketable product. The money loss to my company under the Smith Bread Law will be very substantial as the wholesale bakers, from the nature of their business, must have bread on hand much longer than will the retail bakers.

Recross-examination:

The difficulty in regard to splitting a cent would occur when the dealer sells the bread to the buying public. Many families use more than one loaf in a day. The baker is injured by any plan that increases the cost to the ultimate consumer disproportionately to the cost to the baker. I have not had any experiments made with a view to producing a product which would comply with the weights in the Smith Bread Law. Bread when baked contains from 35 to 40 per cent of moisture, and the solid materials in a loaf of bread would not change during the 24 hour period after baking. The greatest evaporation in bread takes place with a low humidity and a high temperature. The Govern- [fol. 50] ment sheets introduced in evidence, showing the range in humidity and temperature, show a greater range of both than existed at the time our experiments were made.

It is possible that with a twin loaf weighing 1½ pounds that the two parts of the loaf can be split by unscrupulous grocers, re-wrapped and sold for one loaf for ten cents. The objections raised in this case were presented to the

legislature. I have never manufactured a product to comply with the bread law to determine what its condiments would be or its character as a manufactured product. In attempting to comply with the bread law I wouldn't attempt to make the product vastly different from the bread I now make. The difficulty concerning the splitting of a cent on sale price occurs when the retailer sells to the public. It is quite possible in making sales to the retail grocer so that the split cent theory has no bearing upon the wholesaler. It is possible and I have been accustomed in times past to increase or diminish the finished product put upon the market within a variance of one ounce or possibly two ounces of a loaf previously produced. We advertised that the weight of our Betsy Ross bread would be increased by a certain number of ounces, I don't remember what it was. I have not tried and have not caused to be tried any experiments which would produce a product in conformity with this law. I remember the bread produced in court concerning which it was testified to have been baked under [fol. 51] ordinary conditions and to comply with the law and the product would ordinarily and customarily be known to the public as bread.

Dr. HARRY E. BARNARD, a witness in behalf of the Plaintiffs, testified as follows:

I am Director of American Institute of Baking, Minneapolis. Have always been in public work. Was formerly in charge of enforcement of food laws in New Hampshire, then was Food and Drug Commissioner of the State of Indiana. My line of work has taken me into the manufacture and distribution of bread, and I am familiar with the process of baking bread. The chief change in bread after it is baked and for 24 hours, is the loss of moisture, but it loses none of its nutrient value. It is impossible for the baker to control the evaporation from his bread, because he cannot control the termperature of, nor the humidity in the atmosphere, and neither can be control the conditions under which bread is handled either in the bakery or at the store from which it is sold.

It is not possible for the baker to predetermine the quantity of dough which must be put in the oven to produce a

loaf of bread which when baked will weigh an exact amount, because of the uncontrollable conditions which I have mentioned. The uncontrollable element starts in the dough room while the fermentation process is going on, and these [fol. 52] elements exist whether the dough is scaled by hand or by a machine. That is true even in the laboratory, but is much more true in bakeries where conditions are subject to all sorts of variation. In the laboratory the work and the tests are most accurate because of the better equipment and the use of exact appliances as near as possible.

It is impossible to scale dough so that the resulting loaf of bread will weigh not less than 16 ounces, nor more than 18 ounces during the 24 hour period after baking, because the 2 ounce tolerance is too narrow. The baker in his endeavor to make a loaf which would always, in the 24 hour period, weigh at least 16 ounces, would constantly be scaling his dough so heavy that many a loaf would weigh, when removed from the oven, more than 18 ounces, and also might weigh more than the 18 ounces during the 24 hour period, depending upon the conditions in which it should be kept.

A loaf of bread is like a sponge filled with water and its porosity depends on the fermentation of the dough, the character of the flour and a number of uncontrollable factors. A sponge full of water in a cool and humid atmosphere will not lose water very rapidly and neither will a loaf of bread where the temperature is low and the humidity is high, but with air currents blowing through the room, both will lose water rapidly. I am familiar with the conditions prevailing in modern bakeries and it is not possible [fol. 53] for a baker under present day conditions to so scale his dough as to be certain that he won't have 25 loaves of one unit weighing more than 18 ounces, nor less than 16 ounces on the average, in the 24 hour period after baking. Only water is lost by evaporation and no nutrient value is lost by such evaporation.

The bread contains just as much food stuff, but at the end of 24 hours it isn't as good from the psychological standpoint because it would not present such a good appearance, but after being consumed it would be just as good as if eaten fresh. The nutrient value of a loaf is not lessened by the loss of moisture.

Bread made from high absorption flours loses water more rapidly than bread made from low absorption flours, because the latter flour has a lesser moisture content and is a poorer flour both from the standpoint of the baker and the consumer. Bread made from the poorer qualities of flour, that is, low absorption flour, will not evaporate as much in a given time as will bread made from the best flour. Naturally I would think that if a baker is required to maintain a certain weight of loaf and the price of the ingredients should increase, he would endeavor to keep from losing money by using cheaper raw materials.

I have been engaged in research work in the matter of foods for twenty years and for fifteen years for the Federal government. The government committee, of which [fol. 54] I am a member has been endeavoring to define bread and to set up standards of composition, but no conclusion has yet been reached, and the matter is still under investigation. The most important question is that of moisture content in bread, because it is the most important thing in connection with setting a standard for bread, as the moisture content varies greatly; and for the protection of the public the idea is to standardize the process and have a maximum moisture content if that can be done. The committee has reached the conclusion that it is not possible to establish a standard by reference to moisture content, but on the contrary the committee has concluded that the only fair standard will be to state the amount of dry matter which will be contained in bread. For instance, that a loaf labeled one pound in weight shall contain not less than, say, 60% of dry matter, so then it won't make any difference whether the loaf labeled one pound is fresh or dry if it is ascertained that it contains the 60% of dry matter. The committee is trying to establish a workable standard and a workable definition for bread.

Cross-examination:

It is possible to control the temperature of the room and of the oven with limits, as the ovens may be cold as over Sunday. The conditions in the dough room where fermentation takes place, are controllable in the modern bakery, because such room is built with insulated walls [fol. 55] and the temperature can be controlled, but that is the only place. After fermenting, the dough leaves the

dough room and from that time on it is exposed to all kinds of changing conditions of humidity and temperature. It is not possible to tell what percentage of weight is lost from the time the dough is scaled until the bread is removed from the oven, because that depends upon the quality of the flour, the amount of water going into the dough, the temperature of the oven, and the number of minutes the bread is baking.

The Indiana law of 1919 provided only for a minimum tolerance. I don't see how you can provide for a maximum tolerance. I have done a great deal of experimental work in the laboratory to determine the possibility of complying with a maximum and a minimum weight law. There are conditions where it may be done, but they are not practical conditions because it would require equipment to measure to a fraction of a milligram. In my experiments I sealed the loaf up air tight, and the average loss in 24 hours was less than two ounces. The weather conditions are the greatest variables to deal with. In making our tests we endeavored to supply as many variables as possible so as to have the conditions which the baker would have to meet in a year's business. It takes from one hour to six or seven hours to mix a batch of dough, ferment it, prove it, and bake it, because the variations are so great. In the smaller bakeries it may be ten hours. The tests [fol. 56] which I have made have been going on for six months or more. We did not make the experiments because of the passage of any law. I receive my salary from the American Institute of Baking which is supported by the bakers. The purpose of the Indiana law was to have a pound loaf of bread weigh one pound and to make the law workable and protect the consumer we provided for a minimum tolerance of not less than one ounce, but imposed no maximum tolerance. Bread could be made and kept within a two-ounce tolerance, maximum and minimum for 24 hours, if made and kept in an insulated room, but such bread kept under such conditions would, after being taken out, evaporate and then weigh less than the 16 ounces to the pound.

Redirect examination:

There can be no objection to the consumer getting 20 ounces of bread for a pound loaf, but it would be bad

trade practice. What I said about the possibility of making bread within the two-ounce toleration referred to the experimental conditions named, but in the commercial baking of bread it is impossible. In the experimental conditions the bread would be kept in an air tight case the moment it came from the oven so there would be no evaporation, and that is not possible in commercial baking of bread. Bread kept sealed up would not be edible bread in a short time—would not be bread that we eat daily. Bread is in a class by itself as food. There is no food sub- [fol. 57] ject to so many external influences which may change its character and influence its weight as bread, and that is the difficulty that the members of the government committee have had in trying to standardize bread. While thermometers are fairly accurate for measuring atmosphere, for measuring humidity they are not.

Recross-examination:

My view as to the impossibilty of complying with the Smith Bread Law is a real view, not theoretical, but I have never been a baker. Bread might be made which would fall within the limits of the Smith Bread Law, but it would not be what we call commercial bread. I do not believe people would eat it. It would not be such a bread product as the people demand today.

Redirect examination:

One of the chief functions of the American Institute of Baking, of which I am the head, is laboratory work, and the tests and experiments in regard to bread were made by Dr. Morrison under my direction and supervision. The experiments we made in regard to bread were with a 60% absorption wheat patent flour and the loaves were weighed when baked and 24 hours later, and showed a shrinkage under humidity of 33%, and temperature of 88 degrees, of 2.15 ounces per pound. By increasing the humidity and decreasing the temperature, the shrinkage was 1.58 ounces, [fol. 58] and a further increase of humidity and decrease in temperature showed a shrinkage of 1.19 ounces. From my experiments I deduce that the moisture content of a loaf of bread is so delicately adjusted that the slightest change in humidity conditions or in temperature conditions will greatly increase or decrease the loss of moisture,

and so from our experiments I say it would be impossible to make bread to comply with the Smith Bread Law. From my own personal knowledge I know that the results obtained in our experiments are accurate.

Recross-examination:

The experiments were started on one day and finished the next day within a 24-hour period. There were 45 loaves in the total test. The general average for the 45 loaves was 1.64 ounces loss of moisture. The humidity and the temperature were controlled when the tests were made as a special apparatus was used. The temperature and the humidity in the bakery can be controlled in a dough room, but in no other part of a bakery. Conditions in the average bakery are uncontrollable from the moment the process of baking starts until the bread leaves the oven, and the baker only endeavors to keep the conditions of variation as uniform as possible. In our experiments the loaves were kept 24 hours unwrapped.

[fol. 59] Redirect examination:

The loaves were baked under the same conditions but were kept after baking under different conditions. Results for a greater number of loaves would have been very nearly the same undoubtedly. It would not matter how many loaves would be used, the temperature and humidity being the same; and the loaves being from the same dough you would get approximately the same average variation in all the loaves.

Recross-examination:

We made the round top loaf as that is the loaf customarily sold in this country and the shape of the loaf affects the variation very materially. The round top loaf does not lose as much moisture as a split top on account of the greater opportunity in the latter for the gases to escape when the top is split open. The crust is not quite so thick at that point. We did not experiment with the oblong loaf. The conditions after the bread is baked are not controllable.

In experimental work in laboratory I baked a loaf of bread which from time of the scaling weight until it came

out of the oven lost less than 1/8 ounce. In keeping bread 24 hours the average loss was less than 2 ounces. Some loaves lost very little. 45 loaves of bread baked by Dr. Morrison and kept unwrapped for 24 hours showed an average loss of 1.64 ounces.

[fol. 60] Louis W. Haas, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am in charge of the manufacturing, efficiency and laboratory department of W. E. Long Co., promoters of the baking industry in Chicago, operating over the United States. The company is recognized among bakers as an authority on the business of the modern bakery. I have been engaged in the baking business since I was ten years of age, and my work at the present time involves the study of how to improve and better bread making conditions, and in connection therewith I visit the various baking plants throughout the United States. I am a bread baking expert and have recently made experiments in the making of bread under different temperatures and different humidity with a view of determining the evaporation from loaves in the 24-hour period after baking. I prepared Exhibit 4 which shows the results of my experiments made under conditions which were carefully controlled. And the bread was, after baking, kept in a chamber in which the humidity and temperature were controlled and kept constant for the 24-hour period. The conditions were created artificially in our laboratory in Chicago to make them as accurate as possible. A bakery could not maintain such conditions. I made 16 tests of four loaves in each test in September, 1921, all made under different temperatures and different [fol. 61] degrees of humidity. The minimum temperature was 76 and the maximum was 96 degrees. The minimum humidity was 18, and the highest was 55. Those are the maximum ranges of humidity and temperature in bakeries. We weighed the bread after baking and at the end of 24 hours, using a scale that enabled us to weigh .003 of an ounce, such scale being much finer and more accurate than is used in bakeries. The shrinkage of the loaves during the 24-hour period varied from 1.13 ounces up to 2.68

ounces. We used the best flour we could obtain for bread making, and that is strong or high patent flour such as is generally used by bakers to make bread. In our experiments we did not find it possible to make bread which would not under certain conditions shrink more than two ounces to the pound during the 24-hour period after baking. It could be done if the humidity is very high and the temperature low in the place where the bread should be kept. A half-pound loaf evaporates more in proportion than a pound loaf; that is, the smaller the loaf, the greater proportionately is the evaporation; so a large loaf will not evaporate so much in the 24-hour period proportionately as will a half-pound loaf. This is due to the ratio of the surface of the bread, a small loaf having a comparatively larger surface to its weight than a larger loaf, and in a small loaf the distance from the outside to the center is much less than such distance in a large loaf. So a law [fol. 62] allowing the same proportionate evaporation for the weight of the loaf is not scientifically a correct law. The surface of a large loaf is smaller in proportion to its weight than the surface in a small loaf; that is, the mass of bread in a half-pound loaf is less in proportion to its surface than the mass of bread in a pound loaf. Our experiments have shown that to be the fact. In making our experiments the large loaf weighed 18 ounces out of the oven and the small one 9 ounces. Bread made from the best, or strong flour has more water in it than bread made from poorer grades of flour, so the evaporation is greater from good bread than from the poor quality of bread.

I do not think it is possible to fix accurate standard weights of bread without taking into consideration the moisture content. I think the only feasible way is to fix the dry content of bread which is the actual food value. That is because bread is so variable, due to atmospheric conditions, that it is impossible to set a loaf of bread and have it weigh a certain number of ounces at a given time. The evaporation from the loaf of bread does not affect the nutrient value of the bread as the only loss is in the form of distilled water. So a law fixing the tolerance only upon the weight of the loaf is not scientific. I do not think the Smith Bread Law can be complied with in the practical operation of baking because under normal and [fol. 63] average conditions in the operation of a bakery

there would be a greater shrinkage than the two ounces to the pound. Our experiments demonstrated that fact.

Cross-examination:

I keep in touch with bread making and try to find ways and means to produce better bread. I have not made any experiments under the Chicago ordinance. I never heard of anybody trying to comply with that law, and in my experience there I have found bread that greatly violated the Chicago ordinance. We collect bread from the open market in Chicago and judge it and weigh it at the same time. Bread making is a matter of scientific knowledge. Dough is affected by the humidity and atmosphere, the humidity being in dough rooms about 70 to 75. My tests were made on bread, not on dough. High humidity must be artificially created. The humidity affects proving the bread, which means raising of the dough after it is put in the pans, which process is usually done in the dough room or an enclosed chamber with the outside air shut out so that the temperature and humidity can be controlled. This must be done in the dough room because of the variation in the outside atmosphere, especially in fall and winter. It is not possible to control heat in the oven very satisfactorily, but the surrounding atmosphere does not affect such heat. The scaling of dough, that is, dividing it to go into the oven, is usually done in a separate room from the [fol. 64] dough room and which room is not under control of humidity and temperature. The dough remains in such room from 15 to 30 or even 60 minutes. In this process dough loses a small amount of water and also gas. The finished product (the bread) is most seriously affected by the temperature and the humidity after it leaves the oven. With a low humidity the bread will dry out faster than when the humidity is high. However, bread comes out of the oven very hot and will lose moisture under all conditions. With a 60% absorption flour, that is a high quality flour, the loaf of bread coming from the oven would have close to 40% of moisture. During the 24 hour period after baking, bread will be continually evaporating and will not absorb moisture unless possibly the humidity should reach 100%, then a slight change in temperature would cause water to be deposited on the bread. A loaf after the moisture in it is evaporated, will absorb moisture under

certain conditions, but that does not occur within the 24 hour period unless the humidity gets so high as to cause condensation. My tests were made in the laboratory. The first loaf weighed 18½ ounces when it went into the oven and 16½ ounces when it came out of the oven and lost 1.28 ounces in the 24 hour period after baking, which made it less than 16 ounces. If more than 18½ ounces of dough had been put in the oven it would probably have weighed not less than 16 ounces at the end of the 24 hour period, under conditions which were maintained in the laboratory. The more dough that is put in the oven, the greater is the [fol. 65] weight of the loaf when baked.

The reason why we did not use more dough was because we would then possibly have a loaf which would exceed the 18 ounces when it came out of the oven. It is easier for an inspector to determine the standardization of a loaf of bread by weight and size rather than by the dry material or food value contained in the loaf, but bread being so changeable in weight on account of the variable conditions, I can't see how it is possible to do justice that way. The dry content of a loaf of bread is determined after eliminating the water. The loaf is weighed and then it is thoroughly dried out and weighed again. 2½ ounces might be sufficient tolerance in bread at times, but I would not say that 3 ounces would be enough tolerance under all conditions. I am satisfied that two ounces tolerance is not enough. The loss by evaporation in the loaf of bread is greater during the first 6 hours after baking than it is in the succeeding 6 hours and so on. Bread being hot just after it comes out of the oven, loses more rapidly in weight than after it is cooled. The loaves used in our experiments were unwrapped. I think if they were wrapped they would shrink much less.

Redirect examination:

The tables showing the results of our experiments are in grams. 28.34 grams make an ounce. The tables show the kind of dough, the amount of water put in the dough, the [fol. 66] kind of flour used, the scaling weight of the dough, the weight of the bread when it came out of the oven, and the weights at different times thereafter and the losses in weight. They also show the temperature and humidity where the bread was kept for 24 hours. In the table, Ex-

hibit 4, the actual loss in grams is stated in the loaf of bread weighing 16½ ounces, and the calculation is made from that as to the shrinkage in an 18 ounce loaf when baked. The loss in ounces in column 15 of Exhibit 4 are the mathematical conclusions from the basis of gram loss in column 8 on the same loaf. Exhibit 4 shows the temperatures and humidities in the various tests made in the laboratory. Bread made from a strong glutinous flour, or the best flour, has more food value than bread from a low grade flour, and the good quality bread has more water in it and thus evaporates more in quantity after being baked. If tests had been made under greater variations in both humidity and temperature, there would have been shown greater shrinkage in the 24 hour period after baking.

We got the bread baked in Chicago simply for our own purposes and without regard to the Chicago ordinance.

The humidity and temperature in bakeries vary with the changes in the outside atmosphere, because air is constantly entering the establishment through windows and doors. The figures in column 15, Exhibit 4, correctly reflect the evaporation of an 18 ounce loaf when baked no [fol. 67] matter what the proportion of dough was when put in the oven.

Recross-examination:

The figures in Exhibit 4, column 15, are mathematically, physically and chemically correct.

I never made any experiments to determine what the weight of the bread put on sale in Chicago was. I have been engaged in plants outside of Chicago not operating under the Chicago ordinance. Bread making may be reduced to a matter of expert scientific knowledge and certain results may be looked for. Condition of humidity in dough rooms is artificially created. The heat of the oven is not dependent upon either the temperature or humidity of the surrounding atmosphere. The reason my tests did not comply with the law is that I did not put enough dough in the loaf. The loaves weighed about 16½ ounces when they came from the oven and none of them complied with the law.

PETER G. PIRRIE, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am head of the baking department of the Dunwoody Institute, Minneapolis. My work is to take journeymen bakers and to fit them for positions as foremen and superintendents in bakeries. My line of work during my life has [fol. 68] been largely connected with the making of bread and the study and manufacture of all things used in the making of bread. Our concern puts commercial bread on the market and is a commercial bakery and I have charge of it. We have a baking school in the institute. Bread made from good flour loses more after baking by evaporation of the moisture than bread made from poor flour. High absorption flour is called the best. There is no way to predetermine the quantity of dough to put in the oven in order to produce a fixed weight loaf of bread. There is no such process or method known to the bakers. There is no article of diet which has such uncertainty surrounding its making as has bread, and there is no other article of diet in the same class with bread as a food. Between August 2, 1921, and October 19, 1921, I made experiments with 164 loaves made from the best class of flour and under normal conditions. I found that on two of the five days during which the experiments were carried on that practically all of the loaves of bread shrunk in weight during the time between weights, the first weight being taken within one hour after the bread came out of the oven. I did not take into consideration what evaporation might have taken place when the loaf was hot and before it was first weighed and such evaporation is not included in my figures, and if included would increase the shrinkage stated by me. It is not possible for a baker today to comply with the Smith [fol. 69] Bread Law because the average weight of the loaves on certain days might weigh more than 18 ounces on coming from the oven, and at the end of the 24 hour period might weigh less than the 16 ounces. If dough is scaled at 19 ounces it may come out of the oven weighing 18 ounces or only 17 ounces, or more or less.

Cross-examination:

I say as an expert baker of bread that a high absorption flour will produce bread which evaporates more rapidly than bread from poor flour. There might be a great varia-

tion, depending upon conditions of temperature, water used, etc.

In making my experiments I did not start out with the effort to make a loaf of bread which would weigh not less than 16 ounces, nor more than 18 ounces during the 24 hour period after baking. I simply experimented with ordinary bread baked in the ordinary manner to find out how much it lost by evaporation and give the results of my experiments. If I started out to produce a loaf within the two ounce toleration, there would be days when I might be able to do so, and other days when I positively could not do so. Conditions in Nebraska are more conducive to evaporation than in some other parts of the country, because of the higher temperature and lower humidity prevailing. As a result of my experiments at least 50% of the loaves baked did not comply with the Smith Bread law. I would say that 100 of the loaves did not comply with such law and that the balance did comply with the law. We were not [fol. 70] making any special effort to produce a loaf that would comply with the law. I think bakers could come nearer complying with the law by reducing the quality of the bread because of the lower evaporation in both flour and bread.

Badex is a product prepared mainly from corn starch, and the manufacturers of Badex claim that it reduces the quantity of sugar which the baker needs to use and tends to prevent bread from becoming stale.

Redirect examination:

Badex is used by bakers in some parts of the United States. It does not have any effect upon the drying out quality of the bread nor in keeping the bread moist. I used no Badex in my experiments. I do not know of any way whereby a baker during the year could control the conditions and the elements so as to make bread within the elements of the Smith Bread Law.

The uncertain elements beyond the control of the baker are:

1. Evaporation in raw materials and in their storage.

2. A baker can only approximately, in any event, control temperature and humidity.

3. Errors which creep into the weighing and measuring of ingredients for the dough.

4. Loss in mixing.

5. Impossibility of accurately controlling temperature and humidity during fermentation of the dough.

[fol. 71] 6. Loss during fermentation because of the nature and the proportion of the ingredients in the dough.

7. Conditions existing in and about dough dividing.

8. Changes in weight by evaporation or absorption in handling the balls of dough after being weighed or divided and until they go into the baking pan.

9. Evaporation during the proving process.

10. Changes during the baking process in the oven.

11. Losses after bread leaves the oven and is transported by mechanical devices to some other part of the plant for cooling.

12. Uncontrollable weather conditions after the bread is baked.

13. Loss in handling the bread on shelves, racks, or in boxes, etc.

If bread should be left in the oven long enough to evaporate all the moisture, it would not be good or salable bread, and in making the experiments we always consider the popular taste and demand for bread of good quality. Every one wants good bread.

Recross-examination:

I could produce a product which would comply with the Smith Bread Law and my competitors could do likewise but the product would not be salable. It would not be wholesome bread and it would not serve the purpose of [fol. 72] bread. The tendency is for bread made from the stronger flours to use the greatest amount of water.

In meeting changed conditions the same elements in making of bread would be considered as are now considered. I could produce a product which would comply with the law disregarding the question of quality. There would be nothing in the product endangering health.

CHARLES W. ORTMAN, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am a retail baker in Omaha, making about 2,000 loaves of bread per day. The smaller bakeries range from 200 to 500 loaves per day. My bread is sold direct over the counter to the customers in my store. We sell our bread direct to the consumer from three to five hours after it is baked. At times I could comply with the Smith Bread Law, but at times, owing to conditions, I could not. Atmospheric conditions and changes in ingredients are beyond control. There is no way whereby bakers can predetermine the quantity of dough necessary to produce a given weight loaf. I am a practical baker of 35 years standing and am familiar with all the methods used in bread-making. Temperature and humidity are great factors in the manufacture of bread. [fol. 73] High absorption flours, that is, the best flours, make bread that evaporates most in a given time. The better the quality of the bread, the greater the evaporation. I could come more nearly complying with the law by making bread of cheap flour having a low absorption, but even then I do not think I could comply with the Smith Bread Law, but there would be less chance of violating it because there is less moisture in the dough and the evaporation is much less after the loaf is baked. It is the dough and the bread from the best flour that has the most water.

Cross-examination:

We use both stiff and slack dough. Some bakeries prefer one and some another. It is the quantity of water that regulates the stiffness or the slackness of the dough. Each individual baker determines for himself. Since the Smith Bread Law went into effect we have tried to comply with the provisions of that law and have weighed our bread and found that there would not be a day in the week when the inspector could not come in and find that we were not complying with the law. The first loaves in the oven vary from 1 to 1½ ounces from the last loaves in the oven. I think a majority of our loaves will comply with the law and at times lokely 75%. I do not think 75% of our daily run will comply with the Smith Bread Law. Of the loaves that did not comply with the law, some were below the minimum and

some were above maximum from ½ ounce to 1½ ounces: [fol. 74] I do not know whether there was a period of 15 days in which I could not comply with the law. My statement is based upon practical observation as we go along with our bread from day to day. The flours vary. Sometimes we have to increase the quantity of dough in order to have it bake bread of a certain weight. It is much easier to comply with the law during three to five hours than during 24 hours. We only aim to carry over from one day to another about 300 or 400 loaves, except on Fridays. I weighed 5 or 10 loaves at the end of the 24 hour period to find out whether they were within the limit.

Redirect examination:

There might be days such as we have in October when my whole output would be illegal within 24 hours after baking.

Cross-examination:

We dispose of our bread in from 3 to 5 hours after baking. Most of our bread during that period would comply with the law. Loaves weighed by me at end of 24 hours were 5 or 10 in number and picked up at random.

August Louie, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I live in Council Bluffs and have been a baker for over 50 years. At present I am general manager of the Skinner Baking Co., which bakes bread and ships it into Nebraska. [fol. 75] They have been doing it for 16 or 17 years. We ship much bread into Nebraska in less than 25 loaf lots of one size. Last month we had between 250 and 300 shipments of that kind into Nebraska, which does not include the city of Omaha. Yesterday our wagons delivered in Omaha 148 shipments of less than 25 loaves each. That represents the fair average of business done by us in Omaha and in Nebraska from day to day. Our bread comes in competition with the bread made by the Nebraska bakers and we make practically the same kind of bread as is put on the market by the Nebraska bakers, only a little better.

Cross-examination:

In case of accident the loaves sometimes might show a difference of 2 ounces.

We regulate the weight of the loaf according to the cost of the ingredients. We are not able to get all the loaves alike. We scale dough by machinery and occasionally the pockets get out of order and quite a number of loaves will result that will be too light or too heavy and we have had them exceeding two ounces too much or too little. About one-third of our product goes into Nebraska. We have not many customers in Omaha who buy bread in greater shipments than 25 loaves. I think not more than half a dozen.

[fol. 76] MILTON PETERSEN, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am general office and sales manager of the Peterson & Pegau Company of Omaha. The company ships to 462 towns in seven different states, mostly by express in cars which are heated by steam pipes in the winter, which affect the boxes of bread leaning against them, and which dries out the bread. We make many shipments of only 20 loaves of one unit, as customers buy in small quantities in order to get fresh bread. Many customers get two shipments daily. The demand is for fresh bread, and bread is most fresh when it comes from the oven.

Cross-examination:

One-third of our total output is not wrapped because of a large demand for bread that has a crisper crust. We sell both wrapped and unwrapped bread to the same customer.

Redirect examination:

Wrapping bread keeps it softer as it retains the moisture. Unwrapped bread evaporates much faster than wrapped bread. The wrapping paper is waxed on one or both sides in order to make it impervious to the atmosphere. With high humidity, dry unwrapped bread will absorb moisture. Evaporation from bread takes place in proportion to the

[fol. 77] dryness and warmth of the atmosphere. This I know by personal experiments in our own plant. There may be a high or low humidity in either a hot or a cool atmosphere, and a dry atmosphere may be either hot or cool.

Recross-examination:

The humidity in a bakery varies with the atmosphere outside. We have no way of regulating the temperature in the baking room. The loaves when baked are put on racks in the baking room, or in some of the other rooms in the plant to cool. No room is especially arranged for the cooling of bread and the only ventilation is by opening or closing windows, or such like. I helped make the tests in our bakery. I saw the dough scaled and was there when the loaves were taken out of the oven and weighed and when they were weighed at the end of the 24 hours. We scale by machinery, but the tests in order to be accurate, were scaled by hand as machinery is not accurate. The variation may be up to three-fourths of an ounce per loaf and there is no way to correct it. Dough is scaled by a divider which has a series of automatic plungers and pockets into which the dough is pushed in its most active period of fermentation, causing bubbles of carbon dioxide gas which being variable cause variation in the weight. In our tests we scaled the dough accurately. The air in the dough room is moist because the room is insulated and the air [fol. 78] is washed through various sprays of water, the air then being pumped into the room. That is done to assist fermentation.

We have been baking bread in pound loaves that would average 16 ounces, and 1½ pound loaves to average 24 ounces, when taken out of the oven. We try to scale the dough so that the resulting loaves will approximate 16 and 24 ounces, but it is approximate only. There are 1,000 pounds in a batch of dough scaled at about 20 ounces to the loaf, but there is a variation between the individual loaves going through the divider. We cannot take any quantity of dough and know beforehand exactly how much to put in the oven to make loaves of 16 and 24 ounces respectively. It is impossible to predetermine the quantity of dough and make a loaf of a given weight when it comes out of the oven, and also a given weight 24 hours after it is baked. I have tried it many times. To be abso-

lutely sure to produce a loaf weighing not less than 16 ounces during the 24 hour period, the dough would have to be scaled at 20 ounces. The dough used in our tests was part of our regular run of dough, kept in identically the same condition. I saw the dough before it was scaled and it was well mixed and uniform.

Redirect examination:

The variation in small loaves is from 2 to 3 ounces, and on the larger loaves correspondingly. We produce about a million loaves a month, and where we advertise 16 ounce [fol. 79] loaves, it refers to the loaves as a whole, though there is a great variation in many loaves, but the average for the million loaves for the month would be 16 ounces—many over and many under because of the variable conditions mentioned. It is not practical to scale dough by hand because of the cost and time, and the scaling must be done by the divider about which I have testified. There is no method known to make a lump of dough so accurate as to produce certain results. The conditions under which we made the tests were the usual conditions in our bakery—neither special conditions, nor special ingredients, and the tests made reflect the different climatic conditions from a cold day to a hot day. There are many days in the year when the air is surcharged with moisture and during such time the loaves dry out very little and the crust is soft and soggy, and on the other hand there are many days in Nebraska when the atmosphere is very dry and hot and especially during the summer months when the evaporation from loaves of bread is very strong. Under normal conditions the moisture in a loaf of bread is not all evaporated, but if conditions were right the loaf might become totally dry.

To arrive at an average of approximately 16 ounces to a loaf we would have to scale somewhere near 20 ounces of dough, that is, to produce a loaf which would not be less than 16 ounces during the 24 hour period, and thus many [fol. 80] of such loaves would be close to 19 ounces because of the uncontrollable factors mentioned. Even in scaling 20 ounces, though all of the loaves would be above 16 ounces when they would come out of the oven, yet before 24 hours some of them would be under that weight. The moisture in one batch of dough is equally distributed so that each

loaf gets an equal quantity of moisture. The reason why we must put in an excessive amount of dough is the uncertainty of evaporation because of the uncontrollable factors which have been mentioned, and there is no way known to the bakers to control evaporation. If we could know beforehand that a certain day was going to be an extremely dry one, then we could scale more dough for the loaves, but if the day did not turn out to be dry then the loaves would be over weight. So that while we might put in enough dough under all conditions, both wet and dry, to have a loaf of not less than 16 ounces at any time, yet there would invariably be a number of loaves which would be over 18 ounces in weight. That has been determined by the experiments in our baking business. Dough must be put in the oven when the fermentation reaches a certain stage, otherwise it would become sour.

Recross-examination:

In Sheet Exhibit D, shown in evidence, the atmosphere was moist and there wasn't much evaporation. In Exhibits D, sheet 1, E sheet 2 and F sheet 3, where the conditions [fol. 81] were moist and moderate, none of the loaves were under 16 ounces at the end of the 24 hour period.

We could not store bread in the dough room because there isn't space sufficient, and we couldn't make the other rooms like it because the dough room cost $20,000, and is a moist room. Bread must not be kept in a moist room or where there is no circulation of air, because the bread gets soft and develops a musty smell. Where a room is wet and close, with no air, it is not sanitary. In the dough room the air is moist because it is washed, and that keeps it fresh and the gas escapes.

Redirect examination:

In the cooling room where our bread is ordinarily kept there is an atmosphere that has a fair amount of draft through the room at all times. It is a large dry room with changes of air, the air being the same as outside. Our tests were made under normal conditions. The greatest variation in loaves was 4½ ounces. On Exhibit E, only one out of twelve loaves was legal when it came out of the oven. Three were illegal both at the beginning and the end of the period, that is, three loaves were overweight

when they came out of the oven and were under weight at the end of 24 hours. On Exhibit F six loaves were under 16 ounces at the end of the 24 hour period though they were all 18 ounces or more when taken out of the oven. In the [fol. 82] summer months we have very long periods of dry and warm weather and in the winter dry and cool weather with different kinds of atmosphere all the time. There are days in the year when the air is very moist. All the conditions mentioned, of temperature and humidity, are beyond the control of the bakers.

Direct examination:

The experiments set forth in Exhibit 6 were made under my personal supervision, and were made by the superintendent and foreman in our plant. We made 60 experiments with one pound and one half pound loaves from September 20, 1921, to October 12, 1921. Experiments were made under normal conditions, that is, the conditions represented in different places in our bread rooms where different temperatures and humidities are found which will correspond to the different temperatures and humidities that would prevail throughout the year. In making the experiments we attempted as far as possible to have normal conditions which would prevail throughout the year. We baked 330 loaves, 30 experiments of 6 loaves each, and 30 experiments of 5 loaves each, 22 out of 30 of the one pound loaf experiments showed an evaporation in the 24 hour period after baking of more than two ounces and 8 of the experiments showed an evaporation of less than two ounces.

With the half pound loaves, 22 out of 30 experiments showed an evaporation of more than one ounce; one showed exactly one ounce evaporation and 7 showed less than one [fol. 83] ounce evaporation in the 24 hours period after baking. The greatest evaporation in the one pound loaves was 3.73 ounces, which is nearly four ounces, and the minimum shrinkage was 1.33 ounces. In the one-half pound loaves the greatest shrinkage in the 24 hour period was 1.9 ounces which is almost two ounces, and the minimum was .7 or about two-thirds of an ounce.

The loss to my company by enforcement of the Smith Bread Law is the advertising cost which we have been to in building up the business. To date we have spent $58,000

in advertising twin loaves of 1½ pound size, that is, each unit is three-quarter pound or thereabout. Twin loaves constitute 97% of the white bread sold to the retailers. Before this bread law was passed we installed a hedge machine 40 feet tall, and 40 feet wide, having 850 shelves capable of carying 10 loaves each, the loaves being 20 ounces maximum. The machine will not operate with the loaves specified in the Smith Bread Law, and the cost of remodeling the machine I figure at $10,000. Then there are new pans that are required under the new law, $1600, wrapping machines $900, which possibly may be remade but likely will have to be discarded.

The public demand is for a 1½ pound twin loaf, each unit being three-fourths pound. Last year we tried making a smaller sized loaf but the public would not have it.

Cross-examination:

In making the tests we did not bake a twin loaf nor did [fol. 84] we make any tests seeking to produce a product which would comply with the Smith Bread Law. We did not try to control the temperature and humidity except in the dough room in making our experiments. The hedge machine is of endless chains half a mile long with shelves. The machine takes the place of ordinary racks on which bread is placed to cool. The machine is kept moving continuously and is used because it is a space saver and the motion of the bread on the chains tends to increase circulation. In making the tests the bread was not put on the cooling machine. The machine will not carry loaves of a greater weight than 20 ounces unless it should be reconstructed. We haven't aimed to make loaves of more than 24 ounces.

If we had used a greater number of loaves in making our experiments the result would have been the same within reasonable limits of evaporation. The objection to the twin loaf of half pound units is the cost of production and its drying out quality.

C. J. Helfrich, a witness in behalf of the plaintiffs, testified as follows:

I am a baker at Hebron, Nebraska, and have been such for upwards of fifteen years. I bake about 400 pounds

daily. It has been my experience that it is impossible for [fol. 85] me to scale a loaf so as to determine its weight after baking as I use a brick oven and the first loaves put in are the last loaves taken out, and thus remain in the oven from five to ten minutes longer than the last loaves put in, and so they lose more moisture, and while the loaves might be legal when they come out of the oven, they wouldn't be after 24 hours on account of the evaporation which is governed by conditions of the atmosphere from time to time and also conditions in the oven. It is impossible for me to control these conditions. The smaller bakeries do not have any humidifiers as it would cost a small fortune to install one, and we could not afford it. In my community there has not been any demand for a fixed weight loaf. My customers demand good quality of bread.

C. S. JARNAGIN

I am a master baker with Jay Burns Baking Co., Omaha. I have been a baker and a baking expert all my life. For a time was with Triumph Bakeries, Cincinnati, Washburn Flour Company, Minneapolis, and Fleischman Yeast Co., New York, as an expert baker, and was with the United States Government in the Panama Canal Zone, having charge of all bread used by employes. In both experiments and in practical baking I have found that a loaf of bread weighing 18 ounces when it comes from the oven will lose in evaporation from 2¼ to 2½ ounces. There is the great- [fol. 86] est evaporation in bread made from good flour, and a loaf of bread made from the best flour will evaporate more in 24 hours after baking than will bread made from poor flour, because the good bread, owing to the large amount of water required to develop the dough, makes the loaf more porous and it is more ready to evaporate than bread made from a starchy or poor flour.

Cross-examination:

Bran is used in making graham bread and bran is not absorbent. It absorbs a smaller quantity of moisture which gets away more rapidly as the crust is more porous. I know of no conditions under which a pound loaf could be baked so as to lose only 2 ounces in the 24 hour period.

In the tests some of the loaves exceeded 18 ounces when they came out of the oven and some lost 2 ounces in evaporation and some 1½ ounces. If we had put in less dough so that the bread would come out weighing 18 ounces, or less, then we might have had loaves weighing 15½ ounces at the end of the 24 hours as such has been my experience. I made two or three experiments where the batch of bread complied with the law. We cannot bake bread which will be certain in 24 hours after baking to weigh not less than 16 ounces and not more than 18 ounces per pound loaf, that is, the year round; and especially in the spring and fall seasons and winter, because of extreme heat or extreme moisture, or because of extreme dryness in summer, and variable atmospheric conditions at all times. I never made [fol. 87] any tests with the intention of trying to obtain a product which would comply with the law regardless of the quality of such product. The bread was not wrapped in the experiments. Wrapping bread stops the evaporation to some extent.

Redirect examination:

If we had baked more loaves of bread in our experiments the same approximate results would have been obtained, that is, there would have been about the same shrinkage in the loaves. I baked the two loaves which have been cut and sampled by the court and lawyers and the loaf which they all selected as the best (No. 2) is made of 80% of flour and 20% of corn starch, while the other loaf (No. 1) is the best quality bread made from 60% absorptive flour and no starch. No. 1 loaf has the best food value because No. 2 had only 80% of wheat flour in it. I know these facts because I baked both loaves.

Recross-examination:

I wouldn't say that I could bake a quality of bread equivalent to No. 2 which would comply with the Smith Bread Law, but it will come nearer to complying with the law; but I never experimented on those lines because I never expected to reduce the food value of the bread.

I have never made any tests with the intention of obtaining a product which would comply with the law; never have attempted it. Bread in my experiments was not [fol. 88] wrapped. I made no evaporation tests on the

bread containing cornstarch and which was selected by court and counsel for defendant as the best bread.

P. O. L. PETERSEN

Direct examination:

I am superintendent of the Petersen & Pegau Baking Plant, Omaha. Have been engaged in the baking business 34 years and most of the time in baking bread. I am familiar with the methods and conditions of bread-making and have recently made experiments in order to determine the evaporation of bread during the 24 hours after baking. Exhibit 6 represents the results of experiments, being 15 pages numbered from 1 to 15 respectively. The experiments were made under varying conditions of temperature and humidity as shown on the exhibit. Bread made from good flour has greater evaporation of moisture than bread made from poor flour. We use the highest grade of flour in making experiments, that is, 65% absorption flour. The dates and hours when the experiments were made are shown on the sheets Exhibit 6. The results would have been the same in our experiments if we had used 25 or 30 loaves in each experiment.

Cross-examination:

We were not *un*able to comply with the Smith Bread Law in all of these experiments, but in most of them. In our experiments the bread was cooled in the natural atmos- [fol. 89] phere in September. We made no change in conditions when making the experiments—just the ordinary method of experiments. I don't think we could do any better than is shown in the experiments as they were made out of the whole run of bread. The bread was not wrapped. Bread is left in our cooling room until it is sold or distributed. Bread packed in boxes would prevent some evaporation and also bread when wrapped prevents evaporation.

Redirect examination:

A large part of the bread made by our bakery is not wrapped. From my experience as a baker and my knowl-

edge of baking conditions under which bread is produced today, the bakers of Nebraska cannot comply with the Smith Bread Law because they cannot control the conditions under which the bread is made. Some days they might comply with the law, but other days they cannot, because the things entering into bread-making are beyond our control.

Recross-examination:

We were not able to comply with the law in our experimental baking. The company did not tell us what results they wanted to obtain. They just told us to make the tests and find out how much the bread would dry out under the ordinary conditions. I was instructed to weigh the bread as soon as it was cool out of the oven and then 24 hours afterwards. I did not make experiments to see if it would be possible to scale a certain amount of dough which would be within the 16 and 18 ounces after baking.

[fol. 90] Redirect examination:

The experiments were all made under the usual conditions that prevail in the bakery and made with usual ingredients used in making bread. There were a few loaves that complied with the law during our experiments as shown on Exhibit 6. The bread made is the same as was put on the market.

Recross-examination:

Even if some other bakers have experimented and obtained loaves of bread which would weigh not less than 16 ounces nor more than 18 ounces to the pound within 24 hours after baking, I still say that the Smith Bread Law cannot be complied with under all conditions. They might comply with the law under certain days but not all the time. Our experiments were made September and October, 1921, usually dry months.

I was given instructions as to how to conduct the experiment and orders as to what amount of dough to scale 21 ounces. Did not conduct the experiment according to my own ideas to determine the amount of dough to scale or whether it would be possible to comply with the law.

[fol. 91] AFFIDAVIT OF P. O. L. PETERSEN AND JOEL T. STEWART, IDENTIFYING EXHIBITS D, E & F

STATE OF NEBRASKA,
County of Douglas, ss:

Peter O. L. Petersen and Joel T. Stewart, being each first duly sworn according to law, deposes and says that Peter O. L. Petersen is Superintendent of the manufacture of bread in the baking plant of Petersen & Pegau Baking Company at 12th and Jackson Streets, Omaha, Nebraska, and that Joel T. Stewart is foreman in such baking plant; that from July 20 to July 23, 1921, experiments were made by affiants in the baking of bread in said plant for the purpose of determining the varying evaporation of moisture from dough and bread in varying temperatures, and that the results of such experiments are set forth in the sheets attached hereto and made a part hereof, dated July 20, July 21 and July 22 and marked respectively numbers 1, 2 and 3; and that on numbers 1, 2 and 3, the first column refers to the test, the second column to the weight of the dough scaled before going into the oven, the third column to the time when the loaves were baked, the fourth column the weight of the loaves when taken from the oven, the fifth column to the weight of the loaves three hours after baking, the sixth column the weight of loaves twelve hours after baking, the seventh column the weight of loaves twenty-four hours after baking, the eighth column the total loss of weight thru the evaporation of moisture in the [fol. 92] first twenty-four hours after baking, the ninth column to the position of the bread in the oven while baking, the tenth column the condition of the atmosphere where the bread was kept from the time of its baking to twenty-four hours afterwards; that the equipment and methods employed and used by affiants were the same equipment and methods regularly and daily used in Petersen & Pegau Baking Company plant in Omaha, and that the condition of the atmosphere in the rooms where the bread was kept during the twenty-four hour period was not different in any way from the atmospheric conditions prevailing at different times and different seasons throughout the State of Nebraska; that these experiments were made using the daily run of dough out of which bread is manufactured at this plant; that while, in the process of baking

bread, and also for twenty-four hours after baking, evaporation of moisture is taking place in varying degrees according to varying conditions, nevertheless the actual food value of loaves remains the same notwithstanding the evaporation of the moisture and the change in the weight of the loaves.

Peter O. L. Petersen. Joel T. Stewart.

Subscribed in my presence and sworn to before me this 23rd day of July, 1921. Deyo E. Crane, Notary Public. (Seal.)

8—203 [fol. 93]

PLAINTIFFS' EXHIBIT D TO PETERSEN ET AL. AFFIDAVIT

Experiments in Bread Baking at the Petersen & Pegau Baking Company Plant, 12th and Jackson Streets, Omaha, Nebraska, on Date July 20th, 1921

Sheet No. 1

1	2	3	4	5	6	7	8	9	10
Test	Scaling weight of dough in each loaf	Time at which baked	Weight of loaf when taken from oven	Weight of loaf three hours after baking	Weight of loaf twelve hours after baking	Weight of loaf twenty-four hours after baking	Total loss of weight of loaf during twenty-four hour period after baking	Position of loaf in oven while baking	Condition of atmosphere where bread kept
1	20½ oz.	3:30 P.M.	19½ oz.	19½ oz.	19¼ oz.	18¾ oz.	1½ oz.	back	moist
2	20½ oz.	3:30 P.M.	18½ oz.	18 oz.	17½ oz.	17 oz.	1½ oz.	back	moderate
3	20½ oz.	3:30 P.M.	18¾ oz.	18¼ oz.	17½ oz.	16¾ oz.	2 oz.	back	dry and warm
4	20½ oz.	3:30 P.M.	18¾ oz.	18 oz.	17½ oz.	16¾ oz.	2 oz.	back	dry and cool
5	20½ oz.	3:30 P.M.	19 oz.	18¾ oz.	18½ oz	17¾ oz.	1¼ oz.	middle	moist
6	20½ oz.	3:30 P.M.	18½ oz.	18 oz.	17¾ oz.	17¼ oz.	1¼ oz.	middle	moderate
7	20½ oz.	3:30 P.M.	19 oz.	18½ oz.	17¾ oz.	17 oz.	2 oz.	middle	dry and warm
8	20½ oz.	3:30 P.M.	19 oz.	18½ oz.	17¾ oz.	17 oz.	2 oz.	middle	dry and cool
9	20½ oz.	3:30 P.M.	18½ oz.	18¼ oz.	18 oz.	17½ oz.	1 oz.	front	moist
10	20½ oz.	3:30 P.M.	19 oz.	18½ oz.	18 oz.	17½ oz.	1½ oz.	front	moderate
11	20½ oz.	3:30 P.M.	18½ oz.	17¾ oz.	16¾ oz.	16 oz.	2½ oz.	front	dry and warm
12	20½ oz.	3:30 P.M.	18¾ oz.	18¼ oz.	17¾ oz.	16¾ oz.	2 oz.	front	dry and cool

[fol. 94]

PLAINTIFFS' EXHIBIT E TO PETERSEN ET AL. AFFIDAVIT

Experiments in Break Baking at the Petersen & Pegau Baking Company Plant, 12th and Jackson Streets, Omaha, Nebraska, on Date July 21st, 1921

Sheet No. 2

1	2	3	4	5	6	7	8	9	10
Test	Scaling weight of dough in each loaf	Time at which baked	Weight of loaf when taken from oven	Weight of loaf three hours after baking	Weight of loaf twelve hours after baking	Weight of loaf twenty-four hours after baking	Total loss of weight of loaf during twenty-four hour period after baking	Position of loaf in oven while baking	Condition of atmosphere where bread kept
1	20½ oz.	3:30 P.M.	18½ oz.	18¼ oz.	17½ oz.	17¼ oz.	1¼ oz.	back	moist
2	20½ oz.	3:30 P.M.	19 oz.	18¼ oz.	18 oz.	17¾ oz.	1¼ oz.	back	moderate
3	20½ oz.	3:30 P.M.	18½ oz.	17½ oz.	16 oz.	14½ oz.	4 oz.	back	dry and warm
4	20½ oz.	3:30 P.M.	18½ oz.	17¾ oz.	16¾ oz.	16¼ oz.	2¼ oz.	back	dry and cool
5	20½ oz.	3:30 P.M.	18¾ oz.	18½ oz.	17¾ oz.	17 oz.	1¾ oz.	middle	moist
6	20½ oz.	3:30 P.M.	18 oz.	17½ oz.	17¼ oz.	17 oz.	1 oz.	middle	moderate
7	20½ oz.	3:30 P.M.	18¾ oz.	17½ oz.	16 oz.	14½ oz.	4¼ oz.	middle	dry and warm
8	20½ oz.	3:30 P.M.	18½ oz.	17¾ oz.	16¾ oz.	16½ oz.	2 oz.	middle	dry and cool
9	20½ oz.	3:30 P.M.	18¾ oz.	18½ oz.	17½ oz.	17½ oz.	1¼ oz.	front	moist
10	20½ oz.	3:30 P.M.	18¾ oz.	18 oz.	17¾ oz.	17½ oz.	1¼ oz.	front	moderate
11	20½ oz.	3:30 P.M.	18½ oz.	17½ oz.	16½ oz.	14½ oz.	4 oz.	front	dry and warm
12	20½ oz.	3:30 P.M.	18¾ oz.	18 oz.	17¼ oz.	16¾ oz.	2 oz.	front	dry and cool

[fol. 95] PLAINTIFFS' EXHIBIT F TO PETERSEN ET AL. AFFIDAVIT

Experiments in Break Baking at the Petersen & Pegau Baking Company Plant, 12th and Jackson Streets, Omaha, Nebraska, on Date July 22nd, 1921

Sheet No. 3

1	2	3	4	5	6	7	8	9	10
Test	Scaling weight of dough in each loaf	Time at which baked	Weight of loaf when taken from oven	Weight of loaf three hours after baking	Weight of loaf twelve hours after baking	Weight of loaf twenty-four hours after baking	Total loss of weight of loaf during twenty-four hour period after baking	Position of loaf in oven while baking	Condition of atmosphere where bread kept
1	20 oz.	3:30 P.M.	17 oz.	17 oz.	16¾ oz.	16¾ oz.	¼ oz.	back	moist
2	20 oz.	3:30 P.M.	17½ oz.	16¾ oz.	16½ oz.	16½ oz.	1 oz.	back	moderate
3	20 oz.	3:30 P.M.	17½ oz.	16¾ oz.	15 oz.	14¼ oz.	3¼ oz.	back	dry and warm
4	20 oz.	3:30 P.M.	17½ oz.	16½ oz.	15¾ oz.	15½ oz.	2 oz.	back	dry and cool
5	20 oz.	3:30 P.M.	17¼ oz.	17 oz.	16¾ oz.	16¾ oz.	½ oz.	middle	moist
6	20 oz.	3:30 P.M.	17½ oz.	17¼ oz.	16¾ oz.	16¾ oz.	¾ oz.	middle	moderate
7	20 oz.	3:30 P.M.	18 oz.	16¾ oz.	15 oz.	14¼ oz.	3¾ oz.	middle	dry and warm
8	20 oz.	3:30 P.M.	17½ oz.	16½ oz.	15¾ oz.	15¾ oz.	1¼ oz.	middle	dry and cool
9	20 oz.	3:30 P.M.	17¼ oz.	17¼ oz.	17¼ oz.	17 oz.	¼ oz.	front	moist
10	20 oz.	3:30 P.M.	17½ oz.	17¼ oz.	16¾ oz.	16¾ oz.	¾ oz.	front	moderate
11	20 oz.	3:30 P.M.	18 oz.	16¾ oz.	15 oz.	14½ oz.	3½ oz.	front	dry and warm
12	20 oz.	3:30 P.M.	18 oz.	16½ oz.	15¾ oz.	15½ oz.	2½ oz.	front	dry and cool

[fol. 96]

SUMMARY OF PLAINTIFFS' EXHIBIT 6—1–15, INC.

Baking Dates 9–20–21 to 10–11–21

Page	Number loaves	Scaled weight (by hand)	Baked weight when taken from oven
F	12	21 oz.	19.25 to 19.63 oz.
1	10	12 oz.	9.37 to 9.75 oz.
2	12	20 oz.	17.25 to 18. oz.
2	10	12 oz.	10.25 to 10.50 oz.
3	12	20 oz.	17.12 to 18. oz.
3	10	11 oz.	8.50 to 9.75 oz.
4	12	20 oz.	18.25 to 19. oz.
4	10	11 oz.	9.50 to 10.50 oz.
5	12	20 oz.	17.50 to 18.75 oz.
5	10	11 oz.	9.25 to 10. oz.
6	12	20 oz.	17.50 to 19. oz.
6	10	11 oz.	8.50 to 9. oz.
7	12	20 oz.	17.50 to 18.50 oz.
7	10	11 oz.	8.50 to 9.50 oz.
8	12	20 oz.	17.50 to 18. oz.
8	10	11 oz.	8.25 to 9. oz.
9	12	20 oz.	16.75 to 18.25 oz.
9	10	11 oz.	8.50 to 9. oz.
10	12	20 oz.	16.75 to 17.75 oz.
10	10	11 oz.	7.75 to 8.75 oz.
11	12	20 oz.	16.25 to 17.25 oz.
11	10	11 oz.	8. to 8.50 oz.
12	12	20 oz.	17.50 to 18.50 oz.
12	10	11 oz.	8.25 to 9.50 oz.
13	12	20 oz.	16.75 to 17.50 oz.
13	10	11 oz.	7.75 to 8.75 oz.
14	12	20 oz.	16.25 to 18. oz.
14	10	11 oz.	7.75 to 8.25 oz.
15	12	20 oz.	17. to 18.25 oz.
15	10	11 oz.	7.75 to 8.25 oz.
		Totals	Variation
	12	21 oz.	19.25 to 19.63 oz. .38 oz.
	168	20 oz.	16.25 to 19. oz. 2.75 oz.
	20	12 oz.	9.37 to 10.50 oz. 1.13 oz.
	130	11 oz.	7.75 to 10.50 oz. 2.75 oz.

[fol. 97] AFFIDAVIT OF GEORGE F. WILBERG, IDENTIFYING EXHIBIT K-½

STATE OF NEBRASKA,
County of Douglas, ss:

George F. Wilberg, being first duly sworn according to law, deposes and says that he has been a practical baker for twenty-five years; that at the present time he is the proprietor of a retail bread baking business at 1829 North 24th Street in Omaha, Nebraska; that he is conversant with the conditions surrounding the manufacture of bread by retail bakers; that on July 21, 1921, experiments were made by affiant in the baking of bread in his bakery for the purpose of determining the varying evaporation of mois-

ture from dough and bread, and that the results of such experiments are set forth in the sheet attached hereto and made a part hereof; that the first column refers to the test, the second column to the weight of the dough scaled before going into the oven, the third column to the time when the loaves were baked, the fourth column to the weight of the loaves when taken from the oven, the fifth column to the weight of the loaves three hours after baking, the sixth column to the weight of the loaves six hours after baking, the seventh column to the weight of the loaves twelve hours after baking, the eighth column to the total loss of weight thru the evaporation of moisture in the first twelve hour period after baking, the ninth column to the position of the bread in the oven while baking; and the tenth column to the condition of the atmosphere where the [fol. 98] loaves were kept, that while evaporation of moisture took place in the varying degrees during the twelve hour period after baking, nevertheless the actual food value of the loaves remain the same as at the time of baking, notwithstanding the change in the weight of the loaves.

(Signed) George W. Wilberg.

Subscribed in my presence and sworn to before me this 23rd day of July, 1921. Deyo E. Crane, Notary Public. (Seal.)

[fol. 99] PLAINTIFFS' EXHIBIT K-½ TO WILBERG'S AFFIDAVIT

Experiments in Bread Baking at the George F. Wilberg Bakery, 1829 North 12th Street, Omaha, Nebraska, on Date July 21st, 1921

1	2	3	4	5	6	7	8	9	10
Test	Scaling weight of dough in each loaf	Time at which baked	Weight of loaf when taken from oven	Weight of loaf three hours after baking	Weight of loaf six hours after baking	Weight of loaf twelve hours after baking	Total loss of weight of loaf during twelve hour period after baking	Position of loaf in oven while baking	Condition of atmosphere where bread kept
1.....	20½ oz.	11 A.M.	19½ oz.	19½ oz.	18½ oz.	17½ oz.	2 oz.	back	moderate
2.....	20½ oz.	11 A.M.	19½ oz.	18 oz.	18 oz.	17½ oz.	1¾ oz.	center	moderate
3.....	20½ oz.	11 A.M.	18¾ oz.	18¾ oz.	18 oz.	17¼ oz.	1½ oz.	front	moderate

[fol. 100] EVIDENCE: PLAINTIFFS' EXHIBIT 1

Plaintiffs Introduced

Meteorological Summary

1921	Highest temperature Degrees	Lowest temperature Degrees	Normal temperature Degrees	Highest humidity %	Lowest humidity %	Greatest variation in humidity in 12 hrs. %
Jan.	58	7	20	100	41	53
Feb.	74	12	23.7	98	40	48
March	85	14	36	99	17	54
April	87	25	50.5	98	15	48
May	94	37	62.5	99	38	36
June	98	55	71.6	97	34	36
July	97	62	76.5	95	42	34
Aug.	97	57	74.4	99	37	34
Sept.	94	46	65.8	98	18	56
Oct.	80	31	....	99	28	49
Nov.	62	16	....	100	35	41
Dec.	52	–7	....	98	22	33

[fol. 101]

EVIDENCE: PLAINTIFF'S EXHIBIT 4

Comparative Table of Formulæ—Sponge Doughs

Manufacturing Efficiency and Laboratory Department

The W. E. Long Co., Chicago

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Formulæ	Absorption	Flour	Scaling weight in grains	Weight out of oven	6 hrs.	18 hrs.	24 hrs.	4 days	Temperature	Humidity	Fermentation	Net wt. when baked in oz.	Loss in wt. in 24 hrs. in grains	Loss in wt. in 24 hrs. in oz.
			455.9	455.9										
Rich.....	63%	Pat.	458.2	458.2	....	....	32.3	73.6	76 F.	55%	Regular	18	36.2	1.28
				457.4										
Rich.....	55%	Pat.	520	460.5	....	....	28.5	68.1	76 F.	55%	"	18	31.9	1.13
				455.3	....	....	36.4	75.9						
Plain.....	63%	Pat.	520	456.5	....	....	34.7	74.0	76 F.	55%	"	18	39.9	1.41
				459.3	....	....	35.7	73.6						
Plain.....	55%	Pat.	520	462.8	....	....	38.3	73.9	76 F.	55%	"	18	39.8	1.40
				459.0	....	....	35.9	74.4						
Rich.....	63%	F. Clear	520	458.5	....	....	34.3	72.6	76 F.	55%	"	18	38.3	1.35
				460.8	....	....	27.6	59.8						
Rich.....	55%	F. Clear	520	462.0	....	....	27.0	57.7	76 F.	55%	"	18	30.0	1.06
				458.0	....	....	38.2	76.7						
Plain.....	63%	F. Clear	520	457.5	....	....	36.7	74.0	76 F.	55%	"	18	36.2	1.28
				461.5	....	....	27.4	59.9						
Plain.....	55%	F. Clear	521	459.3	....	....	27.4	60.0	76 F.	55%	"	18	30.5	1.08
				458.0	....	44.9	58.3	....	.....	....	.....	..	65.4	2.31
Plain.....	61%	Pat.	520	461.1	....	46.7	61.1	....	92 F.	28%	"	18	68.0	2.40
				460.0	....	45.1	58.5							

Plain.....	61%	Pat.	520	460.1	....	45.4	59.5	....	92 F.	28%	"	18	65.8	2.33
				459.70	....	45.3	59.5							
Plain.....	61%	Pat.	520	459.00	....	43.5	58.5	....	92 F.	28%	1 hr.	18	65.9	2.34
				455.5	....	43.1	55.7							
Plain.....	61%	Pat.	520	458.0	....	43.2	56.5	....	92 F.	28%	1 hr.	18	63.0	2.30
Rich.....	56%	Pat.	520	459.8	25.7	50.3	63.9	....	96 F.	18%	Regular	18	71.5	2.53
				230.8	16.8	32.2	39.1							
Rich.....	56%	Pat.	260	230.4	16.1	30.5	38.2	....	96 F.	18%	"	9	43.2	1.52
Rich.....	65%	Pat.	520	460.1	27.0	54.1	68.1	....	96 F.	18%	"	18	75.8	2.68
				226.9	15.5	31.4	39.2							
Rich.....	65%	Pat.	260	229.5	17.2	32.2	40.5	....	96 F.	18%	"	9	45.1	.59

[fol. 102] By agreement of counsel, Plaintiffs' Exhibit 1931-H supplementing the testimony of the witness Louis W. Haas is made a part of this record and attached hereto as follows:

[fol. 103] PLAINTIFFS' EXHIBIT 1931-H

Mr. Louis W. Haas, chemist for the W. E. Long Company, 155 North Clark Street, Chicago, Illinois (bakery engineers and efficiency experts) cites the figures contained in the diagram below. These figures were made up from questionnaires submitted to a large number of bakers and responded to by 103 bakers scattered throughout the United States. The diagram refers to the popularity of different loaf sizes.

Trend in Loaf Size or Scaling Weights

The figures in the table show for yearly periods the number of loaves of the indicated sizes (scaling weights) in terms of per cent of the total number of loaves.

	Contest year				
	1927	1928	1929	1930	1931 (5 mos.)
Scaling weight 14½ to 16 ozs.	5.0%	5.8%	3.0%	1.6%	.....
" " 16¼ to 18 ozs.	18.1	16.3	18.1	25.7	13.9%
" " 18¼ to 20 ozs.	10.6	12.6	19.8	18.0	26.3
" " 20¼ to 22 ozs.	16.0	13.1	18.9	25.6	15.9
" " 22¼ to 24 ozs.	18.1	21.7	22.7	21.2	38.8
" " 24¼ to 26 ozs.	3.8	2.8	6.1	2.7	1.3
" " 26¼ to 27¾ ozs.	28.4	27.7	11.4	5.2	3.8

I want to draw you attention to the scaling weight between 22½ to 24 ounces; 38.8 per cent of all the loaves, the leading loaves, sent to us showed that scaling weight as against 21.2 per cent the preceding year. And you will note that the loaves with scaling weights between 16¼ and 18 ounces dropped considerably since last year. The smaller units weighing only from 14½ to 16 ounces have disappeared as the leading loaves. The larger loaves, [fol. 104] scaling between 24¼ and 26 ounces, are practically gone. Evidently the 1¼ pound loaf is becoming more popular.

(NOTE.—Further discussion discloses that a certain loaf baking out approximately one and one-half pounds, made in a pan somewhat longer and considerably wider than the

usual pans for such a loaf, has gained rapidly in popularity. This loaf is made of somewhat inferior ingredients, appears exceedingly large, is sold under the trade name "Jumbo", and is marketed at the usual price charged for the 20-ounce loaf being used as a competition loaf.)

After giving the above report Mr. Louis W. Haas, in answer to an inquiry on the part of Mr. R. S. McIlvaine of Pueblo, Colorado, discussed the "Jumbo" loaf. He said in part:

"This Jumbo loaf I believe will appeal primarily to the heavy bread eaters, people with large families, and to the rural population. * * * It is a pound and a half loaf of bread (baked weight). It is baked in a pan 12½ by 6½ inches. The pan is two inches high. * * * It seems to appeal. If you hear the story of some of those bakers who have put it on, you will be amazed at the gain in production in a very short space of time."

Mr. Haas then called upon Mr. H. L. Somers of Fort Wayne, Indiana, to explain the loaf more in detail. Mr. Somers said, in part:

[fol. 105] "I came up — the Long Company and talked to Walter Warrick and some of the rest of them while Mr. Long was down in Mexico. Some of the boys thought it was a good idea and some thought it was no good. I gave an order for some pans and when they came, it just seemed to me everybody in our sales force, all the grocers, and everybody else was hollering for more Jumbo. We ran the capacity of the pans the first week. After that, it was a question of holding everybody down. Then we got another shipment of pans, and the same thing happened in a short time with that shipment of pans, until we finally got enough pans to carry the capacity. Our experience on it was that it was really a sensation, almost as much so as when we put on Swedish rye. By that I mean the favorable comments we received. The people were talking about it, it seemed like everybody was talking about that big loaf. It has gone over exceptionally well in the country districts. One unfortunate thing was that we had to put it on in the country first because we didn't have pans enough to start it in the city. But later on, we got to the city, our success in the city has been very satisfac-

tory. * * * We get eight and one-half cents and it retails for a dime. I might say we have done a marvelous mail order business. I think our list includes the whole of the United States from Maine to California. * * *"

[fol. 106] EVIDENCE PRESENTED IN THE CASE OF P. F. PETERSEN BAKING COMPANY ET AL. VS. ARTHUR WEAVER, AS GOVERNOR OF THE STATE OF NEBRASKA, ET AL.

The following evidence was presented at the trial in the District Court of the United States for the District of Nebraska, Lincoln Division, of the cause wherein P. F. Petersen Baking Company, et al., were Plaintiffs, and Arthur Weaver, as Governor of Nebraska, et al., were Defendants, and which suit involved the constitutionality of the 1927 Nebraska Bread Weight Law which was as follows:

"7613. Bread, Standards of Weight.—Every loaf of bread made or procured for the purpose of sale, sold or offered for sale in the State of Nebraska, shall be of the following weights avoirdupois:

One-half pound, one pound, one and one-half pounds, and also in exact multiples of one pound and of no other weights. Whenever twin or multiple loaves are baked, the weights herein specified shall apply to each unit of the twin or multiple loaf, provided that a twin one and one-half pound loaf may be made and sold, but units of said loaf must not be sold separately."

"7614. Tolerance, How Determined.—Tolerance at the rate of one ounce per pound under on all individual loaves shall be allowed and a tolerance at the rate of three and [fol. 107] one-half ounces per pound in excess, but none in deficiency of the standard weights herein prescribed shall be allowed on the average weight of at least five loaves of the same nominal weight and of the same manufacturer, or on the average weight of all such loaves when the supply available at the time and place of weighing exceeds five such loaves and is not more than ten loaves. If more than ten such loaves are available, at least ten shall be weighed in determining the average. Whenever the number of such loaves available exceeds the number of loaves so to be weighed, the loaves weighed shall be taken at random. Tol-

erances shall apply for a period of twelve hours after baking or delivery to retailer."

"7615. Violation, Penalty.—Any person, firm or corporation violating any of the provisions of this Act, shall be punished by a fine of not less than ten dollars nor more than one hundred dollars."

Dr. HARRY E. BARNARD, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I reside at Indianapolis and am consultant to the Food Industries chiefly in the matters relating to the chemistry of foods and their technical manufacture. The manufacture of bread is in a sense my specialty.

[fol. 108] For many years I was a State official for the States of New Hampshire and Indiana. I acted as State Food Commissioner and also as State Commissioner of Weights and Measures. In 1919, I resigned my official positions to associate myself with the baking industry, first as director of the American Institute of Baking and later as secretary for the American Bakers Association. In 1921, I became president of the American Institute of Baking and resigned that in 1927, since which time I have been consultant of Food Industries. For many years I represented the U. S. Department of Agriculture in the Indiana district, and for some eight years was a member of Federal Food Standards Commission to investigate and determine and set the standards and definitions for foods. I have been a referee for the Government in its technical work concerning foods for many years. During all such time I have been conversant with the methods of baking bread prevailing over the country and the conditions generally with reference to bread making and bread selling.

I have read the Nebraska Bread Law of 1927 and carried out a series of experiments for the purpose of determining whether or not the bakers can operate under that law. Commencing on September 6, 1928, I went into a commercial (wholesale) bread bakery at Indianapolis and took a commercial sponge dough the formula of which was flour 100%,

water 62, salt 2, yeast ¼, milk 4, sugar 3, shortening 3, [fol. 109] yeast food 3/10. After being mixed, the dough was scaled into loaves weighing 20 ounces and when baked were left in the cooling and shipping room unwrapped. We took 50 loaves of bread and weighed them individually at the time they came out of the oven, then after 1 hour, 2 hours, 4 hours, 8 hours, and 12 hours, and thereafter after every 12 hours during a total period of 72 hours the exact weight to ¼ of an ounce was taken on each loaf and is recorded in the tabulation filed herein (plaintiffs' Exhibit 1). The loaves were taken in five groups of 10 loaves each and the average weights were taken of each group. 36 hours after baking the first group averaged 15.90 ounces, second group 15.85 ounces, third group 15.95 ounces, fourth group 15.85 ounces, fifth group 15.90 ounces.

48 hours after baking the loaves averaged: First group 15.575 ounces, second group 15.475 ounces, third group 15.525 ounces, fourth group 15.525 ounces, fifth group 15.40 ounces.

60 hours after baking they averaged: First group 15.337 ounces, second group 15.262 ounces, third group 15.337 ounces, fourth and fifth groups 15.287 ounces.

72 hours after baking the loaves averaged: First group 15.125 ounces, second group 15 ounces, third group 15.05 ounces, fourth and fifth groups 15.10 ounces.

Except that the dough was scaled at 20 ounces, the dough [fol. 110] was handled and the loaves were baked in every particular in the customary way among wholesale bakers.

There are times during the year when the conditions of heat and humidity would vary greatly from the conditions prevailing when this test was made. At that time the weather was unusually cool for September, being 70 degrees or lower, and the humidity was relatively high, running up one day to about 96 or 7. These conditions are not usual in the summer months and there is a distinct difference in the atmosphere in which these experiments were carried on from the atmosphere of shops in which bread is usually sold.

The greater the heat, the greater will be the evaporation of moisture from bread and this is particularly true if the humidity is low. With high humidity, evaporation of moisture is less than if the humidity is low in quantity. The greater the humidity, the less evaporation there is. In

the evaporation of moisture from bread, there is no other observable chemical change. The other ingredients in the bread are of the same weight when the loaf comes out of the oven and is moist or when the loaf is bone dry. After baking, the only loss is in moisture, which evaporates.

I planned my experiments in order to produce a loaf which would be legal under the Nebraska law if it were possible to do it, and so scaled the dough at 20 ounces. [fol. 111] There will be many times during the year when much more evaporation would take place in loaves of bread than took place in these loaves with which I made my experiments. The loss of moisture between the 2 hour period and the 24 hour period after baking was not great due to the fact that the temperature of the room in which these loaves were held was low and the humidity high. If during the hotter days of the summer these loaves had been weighed, a very much greater loss would have taken place over these periods than was noted, and with artificial heat the humidity of the air would be decidedly lower than under the conditions of the experiments and the loss of moisture would be much more rapid than was noted.

I know of no conditions under which a wholesale bakery could operate its plant without losing money if it were compelled to scale the pound loaf at 20 ounces of dough, as thereby ordinarily the customer would receive from 1½ to 2 ounces of bread in excess of the pound. To continue in business, the baker would have to raise the price of bread, which price has become standardized over the United States, and if the baker is required to use a larger amount of raw materials than the usual practice requires, then he must necessarily increase his selling price to take care of that added cost of materials otherwise he will lose money because the difference between profit and loss in modern bakery practice is very low.

[fol. 112] It might be possible for a baker to scale the loaf overweight by the use of cheaper materials but the baker could not maintain his business because the customers have learned to appreciate the value of high quality ingredients. The public would not be satisfied with a lower quality of bread.

The greater quantity of dough of course has the greater quantity of evaporation of moisture. A less weight of dough than was used in the experiments would have meant less weights of the loaves at the end of the various periods.

Moisture content of commercial bread will run between 26 and 38 per cent 6, 8 and 10 hours out of the oven. In the pound loaf where the dough was scaled at 20 ounces there would be about 7½ ounces of moisture and 12½ ounces of solids.

I am familiar with conditions prevailing in stores and bread dealers' places through the country, having made a special study thereof in years past. I went into stores heated by stoves and hot-air furnaces in the winter. My investigations showed that commodities in a store artificially heated during winter or the cool months lost weight very rapidly, and that bread notably contained much less moisture than when it was left in a less hot and a more humid atmosphere. The loss of moisture in the ordinary heated grocery store is high, and loaves of bread kept un- [fol. 113] der such conditions would lose moisture very rapidly—indeed, would lose as much moisture in 12 hours as they would on the racks in the cooling room of the bakery in 24 or 36 hours.

If the baker scaled his dough too high and if the bread made therefrom was kept at a low temperature and high humidity, the loss of moisture might be so slight that the loaf would be in excess of the maximum weight (in the Nebraska bread law). The loss of moisture from a loaf of bread or any other material which absorbs moisture is simply an attempt to set up an equilibrium between moisture content of materials and the outside atmosphere. If the outside atmosphere is saturated with moisture, there will be low moisture evaporation or a low loss of weight in a commodity, whether bread or dough. Evaporation of moisture from a commodity depends upon three factors, time, temperature, and humidity, and likewise the quality of ingredients used in the dough. If ingredients are of a dry nature, there is less evaporation during the baking process than if the ingredients are of a wet nature.

The enforcement of the Nebraska bread law of 1927 will give the small local baker in a town or village or hamlet a very great advantage because such local baker's business is usually confined to his neighborhood and his bread is usually sold within 3 or 4 hours after baking. Because of that fact it is possible for such local baker to use, and he [fol. 114] does use, a dough of less nutrition content than the commercial baker, he can make a loaf without using

any milk or shortening as it would be sold before much moisture had evaporated and the weight thus be below the requirement of the Nebraska law. Thus the wholesale baker shipping his bread from his plant removed many miles from the small town in which the local baker is operating, cannot compete with him. The wholesale baker or the commercial baker, being the same thing, would have to scale the dough in his loaves very much higher than the small or local baker.

Dr. Harry E. Barnard—Cross-examination:

The present Nebraska bread law has a tendency to prevent the wholesaler from obtaining a monopoly. I think the wholesale bakers have not always produced and sold in Nebraska a loaf of bread made up of the ingredients which I have described. During the past 10 years the bread manufactured by wholesale bakers has improved. I have been familiar with the bread sold in Omaha since 1919. The bakers have always made a good loaf but it has only been within the past few years that scientific research has shown the importance of using milk as an ingredient of the dough mixture. I think the small local baker makes competition for the wholesale baker. Some of the people in the vicinity of the local baker will buy the wholesale [fol. 115] bread if it is better than the local baker's bread. If the demand be for quality bread, then the business of the wholesale baker will be increased in the community where the local bread is baked, and the demand of the people is for quality bread.

There is a good reason why the size of the loaf should not be standardized and the baker be permitted to fix his own price. The reason is that the material cost varies constantly with the market—on flour, milk and nearly every ingredient which goes into bread. The baker finds it difficult to change the price of his loaf. The lowest unit of coinage is a cent and it is difficult for him to adjust his bread values to bread prices when the flour market, for instance, is fluctuating widely, but it is a simple matter for him to adjust his scaling weight so that he neither loses money nor makes an excessive profit in his business. It is true that various bakers have various prices for their respective products. The price or value is dependent upon

the character of the loaf. If they make a raisin bread, for instance, they must necessarily get more than if they make just the ordinary loaf of bread.

The customary scaling weight of a one pound loaf varying somewhat because of the absorption of flour, is from 17½ to 18 ounces. The food value of a loaf of bread is determined merely by the weight of the moisture free [fol. 116] material. Water contributes no nutrition to the loaf. If a baker has to scale his loaf at 20 ounces, he is adding to the dry weight of that loaf almost 2 ounces or ⅛ of a pound or about 16% more food for his unit price than if he were scaling the dough at 17½ or 18 ounces. The nutrition value of the loaf would be increased from about 15 to 16%.

Today the making of bread has become a more or less scientific process. I have conducted many laboratory experiments in the making of bread during my long experience and the results obtained were shop experiments. It is not usual to make a test of the flour before it is mixed. The usual practice is to make a test of a carload not of the individual barrel, but flour is usually tested before it is made into dough so that the baker will know about what percentage of moisture is required to make a perfect mixture. It is not possible to ascertain about what the percentage of evaporation will be. That cannot be determined definitely. Indeed, it cannot be determined at all because it is so entirely a matter of conditions after the dough is mixed. In the scaling of the dough it is possible to scale so as to know with reasonable accuracy about what the weight of the loaf will be when baked and in certain large stores which have proper installations, it is possible to determine the temperature and humidity of the place where the bread is stored after baking, but that is not true [fol. 117] of the usual shop or grocery store where bread is sold to the consumer. The control of moisture out of the loaf after it comes out of the oven depends very greatly upon the oven. In the 12 hour tolerance period it makes a difference whether the bread is wrapped or unwrapped as the wrapping of bread has a tendency to prevent the evaporation of moisture. It is customary among bakers to wrap certain types of bread, and under the sanitary laws of most States all bread must leave the grocery stores wrapped.

Dr. Harry E. Barnard—Redirect examination:

It is not possible to predetermine the evaporation of moisture in bread because there is no possible method known to the bakers of determining just what is the percentage of moisture in the various ingredients used in the dough. Evaporation which takes place in the baking process is influenced by many elements beyond control of the baker, such as the moisture content of the flour, sugar, yeast, milk, and all the other ingredients; also in the quantity of dough which varies because of the lack of accuracy in the dough divider; also because of the impossibility of determining beforehand the exact degree of heat in the oven, and also the variations of the degrees of heat depending upon the location in the oven where a given loaf may be and also the length of time it may be in the oven. Also [fol. 118] the type of the oven is a factor. In a traveling oven in which the first loaves put into the oven travel through and are the first loaves out, the moisture conditions are different than in a peel oven in which the last loaves into the oven are the first loaves taken out and the first loaves into the oven are the last loaves taken out. Under these conditions there is a decided difference in weight of loaves made out of the same dough and baked in the same oven. In order to have a legal loaf when the loaf comes out of the oven, the baker must not scale the dough very much over 19½ ounces, the maximum of the legal loaf. Under some conditions there is very little evaporation and so scaling a dough loaf at 20 ounces might result in a loaf of bread which when baked would be more than 19½ ounces, and thus illegal.

I do not consider the 1927 Nebraska bread law as a workable law nor do I think it is possible for the bakers under all circumstances to comply with it. At times they may have a loaf of bread that is over the maximum if they put too much dough into the loaf and at times they may have a loaf which will be below the minimum if they put in too little dough. It is my opinion that we should get away from the idea that bread should weigh certain ounces at the time it is sold. I think we should revise our method of protecting the consumer and base the value of the bread upon its actual nutrition value in terms of total [fol. 119] food present in the commodity without relation

to the amount of moisture. The food value consists of the solid ingredients in the bread. The food value in a loaf of bread is enriched by evaporation of the moisture but the question of palatability must be considered because a loaf which has dried out until it is hard is not as palatable as a loaf which is fresh and moist.

FRED HANNEGAN, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am in the retail grocery business in Omaha and handle bread in large quantities during every day of the year. The atmosphere in my store is practically the same during the year. We can only control it by fans. The store is heated in the winter time and is kept rather warm because of the women clerks. There is no method known to us retail dealers of controlling the evaporation of moisture in bread after we receive it from the bakers, and if the natural conditions in the store building evaporate moisture in the loaves and make them less than the legal weight in the 12 hours after receiving, we will be liable to fines and the penalties of the law. We could not sell the bread thus below the legal weights and it probably would be a waste [fol. 120] to us. We do not ordinarily sell all of our bread out each day but carry some of it over to the next day. I have been in the retail grocery business for about 30 years.

Bread is exposed for sale on the counters, some in bread bins and some on racks which are fully exposed to the air. Bread in bins or drawers is also exposed more or less to the air. Sales are made in one and two loaves mostly according to the size of the family. Bread is bought fresh every day. I should say that in retail stores bread is sold mostly in one pound loaf lots.

The general price for a pound loaf of bread in Omaha and vicinity is 10¢ and for a pound and a half loaf 15¢. The prices have become standardized by long use and I think that statement applies to the whole State of Nebraska. In an effort to comply with the bread law of Nebraska, I think the prices will have to be raised because the bakers will be forced to raise the prices to us dealers

in attempting to comply with the law, therefore the consumer will have to pay more than he would without the law and it would result in the retail dealer, under some circumstances, making an abnormal profit at the expense of the consumer.

LOUIS SOMMER, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am a retail grocer in Omaha and handle bread, both [fol. 121] wrapped and unwrapped. I have no control in my store over the conditions of the atmosphere that prevail. I know that retail grocers have no method of controlling the condition of the atmosphere in their stores. In my store we keep the bread in racks and on counters. It is exposed to the air. After the bread is delivered at my store I do not know of any method whereby we can preserve the moisture in the bread, as that is absolutely impossible. We are at the mercy of the elements of the weather, the heat, the humidity, etc. If the bakers should not take back illegal loaves, then they would be so much waste with consequent loss, and that is true in all retail shops. It is almost impossible to sell all the bread delivered to me each day. Sometimes we run short but it's mostly the other way and every day in the week we have to carry bread over, and so we have bread on hand for more than 24 hours after it is delivered to us. The customary prices of bread in Omaha have been 10¢ for a pound loaf and 15¢ for a pound and a half loaf. Have been 30 years in the retail bread business.

Louis Sommer—Cross-examination:

I said it was impossible to preserve the legality of the loaf of bread from the time I received it for a period of 12 hours thereafter. We have made tests every once in a while to see what we were really giving the customer. We [fol. 122] have not made tests to determine how much evaporation had taken place during the period of 12 hours and thereafter, but in the evening we have weighed bread to see how much less it weighed and found a shrinkage of

all the way from an ounce to 2 ounces in the evening in bread that had been baked the evening before, that is, it would decrease in weight from 1 to 2 ounces in the 24 hours, either wrapped or unwrapped bread. The wrapped bread is a little slower in shrinkage.

ALBERT WOHLNER, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am a retail grocer in Omaha and have been such for 15 years, and during that time have sold bread in my store, wrapped and unwrapped. The bread, some of it, is in a case and some of it on the counter. It is customary among retailers to expose their bread on the counters.

We cannot control the heat or the humidity in the atmosphere of our store either in winter or in summer. In summer the temperature is much the same inside as it is outside. In winter we keep the store heated fairly warm.

We have no means of knowing how old bread is when it is delivered to our store by the baker but there is more or less evaporation of the moisture in the bread when the [fol. 123] bread is in the store. We have no control over that evaporation. When bread becomes old the baker takes it back. If he did not, it would be wasted and we would sustain a loss through the loaves becoming illegal on our hands.

Albert Wohlner—Cross-examination:

I never made any tests to ascertain what the evaporation would be and we take it for granted that the loaves are legal when we get them from the baker. The bread in the store doesn't lie in the sunlight and the bread is not kept over the heat register or in the sunlight.

ROBERT A. LAUGHLIN, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am manager of the Standard Bakeries Corporation which is a corporation organized in Delaware. The paid up

capital stock is more than a million dollars, and with its predecessor it has been doing business in Omaha since 1913. The plan in Omaha occupies most of the block and the output for the year is in the neighborhood of seven million loaves of bread, equal to about seven million pound loaves of the value of approximately a little over a half a million dollars. At the present time when the prices of ingredients of bread increase or decrease we lower or [fol. 124] raise the weights of the bread in accordance with the increase or decrease of the cost of ingredients. That has been the custom for years. No complaint in regard to this method has ever been made that I know of. There has never been any complaint from our customers.

To comply with the 1927 Nebraska bread law will cost us about one cent a pound of bread extra, which should be around $50,000 a year. We expect to continue in business for at least the next 10 years and in that time there would be half a million dollars loss to us under this law if we have to comply with it.

We have no known method of controlling either the quantity of moisture in ingredients which go into the dough or the moisture in the oven or the moisture in the bread after it is baked, as we are subject to all natural conditions. We can't tell when we are making up the dough loaf just what it will weigh when it comes out of the oven. We can't predetermine the difference between the weight of the dough loaf and the weight of the loaf of bread after it is baked. Ingredients fluctuate in their weights. We use mechanical dividers of dough, but there is a difference in the weights of the dough loaves because the outside pockets in the mechanical divider scale a little more and the center pockets scale a little less and portions of the dough cling to some of the dough loaves and not to others. We cannot always arrange to have the same time [fol. 125] elapse from the time the dough is mixed and the time it gets in the oven as a dough loaf because the condition of the flour and other ingredients enter into the matter. Dough that is longest kept after it is prepared and before it gets into the oven has the greater evaporation of moisture. We can't control the degree of heat in the oven. It is subject to change depending upon natural causes. Some portions of an oven are hotter than other

portions and some bread is in the oven for a longer time than other loaves of bread in the same baking.

Cross-examination:

I don't think we can sufficiently predetermine the quantity of dough to make a certain weight loaf. For a pound loaf we usually scale from 18 to 18½ ounces of dough and when it comes from the oven it will weigh a little more than a pound. We have to scale heavier to always have the loaf weigh a pound when it gets to the retail dealer. The law in regard to labeling the weight on the wrapper is in effect.

To comply with the 1927 bread law the pound loaf would have to be scaled 2 ounces heavier or possibly more, and we would have to charge more for the loaf. In order to comply with the law so that neither we nor our customers would be subjected to the penalty, the only safe way would be to increase the scaled weight from 2 to 3 ounces to the [fol. 126] pound loaf and it would be necessary to raise the price of bread due to the increase in the cost of the scaled dough loaf, and my conclusion is that to make a loaf which would correspond with the law, it would take more flour and other ingredients to produce it. We have a standard price. We are wholesalers and sell to grocerymen upon whom we depend upon getting expressions of what the public thinks of our product, and the grocers continue to buy our bread and have made no complaint. We have made house to house solicitation of our products and there were no complaints from the canvassers. I think the public is quite discriminative in bread due to the keen competition in the industry, and I think that the public are pretty keen on watching prices on all commodities. Wholesale bakers as a rule do not fluctuate the price.

Redirect examination:

There are times in the bakery when ingredients in the dough are very dry and when the moisture in the dough and in the oven is great that there would not be much evaporation between the time when the dough is prepared and when it comes out of the oven as a loaf of bread and as that loaf of bread out of the oven to a pound must not exceed 19½ ounces, we cannot always determine at what weight to scale the dough because if we scale too high then

we have an illegal loaf when baked. These conditions are [fol. 127] frequent in hot weather and the climate of Nebraska is a very dry one. We are therefore limited under this 1927 bread law to the quantity of dough which we dare put into any given pound loaf because if it weighs more than 19½ ounces to the pound when it comes out of the oven it is an illegal loaf. That size loaf may, before it is sold to the consumer by the dealer, be less than 15 or 16 ounces in weight because of the natural conditions of the moisture and of heat in the atmosphere, not only in our plant but in the express cars in which the bread is transported and in the stores of the dealers. There is no known method to control all these conditions so that we may at all times have a legal loaf.

Recross-examination:

Under our own private tests the loaf will lose as high as 4 to 5 ounces within a period of 72 hours after baking. In making the tests we wrapped the bread and placed it in a box in the bakery where the temperature was practically the same as it was outside and then we weighed it at intervals of 12 and 24 hours. We kept them in the bakery and exposed to sunlight. We made tests at periods varying from 12 to 72 hours. At the end of 60 hours the shrinkage was from 4 to 5 ounces. At 72 hours the shrinkage was from 5 to 7 ounces. The bread was eatable bread at the expiration of those periods. I do not remember the weights at the end of 12 hours and 24 hours, but can get [fol. 128] them for you if you want me to. I remember the weights from 36 to 72 hours after baking.

OLUF PETERSEN, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am superintendent of the P. F. Petersen Baking Co., Omaha. I am a practical baker and have been so engaged for about 40 years. I am familiar with the present day methods of baking bread and made some tests of bread baking to see whether or not we could come within the terms of the 1927 Nebraska bread law. There were 12

loaves in each batch of the tests made and which are shown on plaintiff's Exhibit 2. In that exhibit we show the scaled weight of dough, the weight when baked, the weight in each loaf at the end of 6 hours, 12 hours, 18 hours, 24 hours, 30 hours and some of the experiments 36 hours, 48 hours and 60 hours. The experiments were carried on in the bake shop under usual conditions. We did not create unusual conditions for the purpose of making experiments. The bread in the experiments was prepared as dough and baked and kept just the same as is the regular bread which P. F. Petersen Baking Company is selling to the dealers throughout Nebraska, and ingredients used were the same are are ordinarily used in the making of our bread. The conditions as the ingredients [fol. 129] were mixed, baking temperature and humidity during the experiment were just the same as prevail in the plant when getting out bread for customers.

Cross-examination:

When I made the test contained in Exhibit 2, I knew what were the provisions of the 1927 Nebraska bread law and I started out with the intention of baking bread which would comply with those provisions if I could do so. I made no other tests. The scaling was done in the usual way by machinery and when the loaves came from the oven the most that any of them weighed was 25 ounces. We allowed in some cases 1 ounce and in other cases 2½ ounces for evaporation after the bread was baked. In a period of 12 hours after baking a pound and a half loaf loses 1 or 2 or 3 ounces. In 24 hours after baking it loses 3½ ounces or 4 ounces. In the first experiment as shown by the first 12 loaves, none of the loaves complied with the law 6 hours after baking. In order to know definitely that you would comply with the required weight after the various periods, you would have to scale the dough considerably higher, and if in the experiments we had scaled more dough, the loaves would not have fallen below the prescribed weights. The same is true of the next test of 12 loaves on Exhibit 2 and is true of all the other tests so it is possible to bake bread that will comply with that law. [fol. 130] I testified in the previous case when the other bread law was involved and I made tests under that law and thought at that time that the tolerance of 2 ounces per

pound, one ounce above and one ounce below, was insufficient, but I think that by an allowance of an ounce or two of additional dough, the law can be complied with.

Redirect examination:

Whether we can bake bread to comply with the law will depend upon the condition of the ingredients, and the condition of the oven and the condition of the atmosphere and the time the bread is kept, and from my experiments it is not possible at all times to bake loaves of bread which will be within the maximum and not below the minimum weights. That's the conclusion I came to from my experiments.

I learned my trade in Denmark and have been a baker in Omaha 24 years, all of which time I have been with the P. F. Petersen Baking Co.

In making the experiment I did not attempt in any way to influence the results, but baked the bread in the usual way that bread is baked in our plant in Omaha.

[fol. 131] BERT FRANCIS, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am manager of Quaker Baking Co., Council Bluffs, Iowa, a corporation organized in Maine. Have been 13 years in my present position and in the baking business. I am familiar with present day methods in wholesale bakeries and can state that there is constant evaporation going on from bread after it is baked. There is from 40 to 60% water in the ordinary loaf of bread and we cannot control the moisture in the ingredients which go into the dough loaf, and there is no method known to us of determining just how dry the flour and other ingredients that go into the mixture of dough may be. There is a great quantity of moisture in the ingredients which make up the dough loaf and it is impossible to absolutely determine at all times the degree of heat in the oven, and all parts of the oven cannot be kept at a certain degree of heat. The loaves in the ovens next to the flues bake a little harder than the loaves in the rest of the oven and the last loaves

in are taken out first and the first loaves in taken out last, and of course the last loaves out are in the oven a much longer period that the first loaves taken out. Bread is kept on hand for a good long period, depending upon the receipt of orders therefor. 'We ship bread about 150 miles [fol. 132] into Nebraska by express, and express cars in the winter are kept very hot and in the summer are about that of the temperature outside. We have been accused of shipping stale bread due to the fact that the express cars were hot and dry and bread which was fresh when it left the plant dried out in the express car because of conditions and so it was considered stale. We cannot control those conditions.

Ordinarily a pound loaf of bread is scaled at 18½ ounces, and in order to comply with all the provisions of the 1927 Nebraska bread law, that is, to meet both maximum and minimum provisions, we would have to scale from 3 to 4 ounces heavier in dough, which would be a costly thing to do. It would cost us, I figure, about $43,000 a year extra, and as we expect to continue in business for the next 10 years, in that length of time the loss would be $430,000.

I know that prices on bread have become standardized at retail at 10¢, 13¢ and 15¢. 10¢ for a pound loaf and 15¢ for a pound and a half loaf are about quality prices and have been so for some time. At the present time the equilibrium between the cost of bread and sale is obtained by making a slightly smaller loaf when the cost of ingredients increases rather than to increase the price of the loaf to the customer and when the price of ingredients lowers then we give the customer a larger loaf. Competition controls that. Under the 1927 Nebraska bread law we can't do that because it provides for rigid weights. As a [fol. 133] practical man, I say that during all times of the year considering the vicissitudes of temperature and climate in Iowa and Nebraska, we can't comply with the 1927 bread law and thus always have on hand either in our bakery or in the dealer's store legal loaves of bread. It can't be done. In spite of everything that we can do or that other bakers can do in their bakeries there will be times when both ourselves and our dealers will have illegal loaves on hand.

Cross-examination:

My estimate of loss was based upon our total business, of which 50% is done in Nebraska, so 50% of our business will not be affected by the Nebraska bread law of 1927, and hence our loss would be 50% of $43,000 per year.

When we ship bread by express we do not require the express company to pay any special attention to the bread to keep it from drying out. We have not had bread returned to us, but we have had complaints about shipping stale bread due to its drying out in the express cars.

Some flour has a greater percentage of absorption than other flour, but we don't determine that before we make up the dough mixture of which the moisture content is about 40%. In compliance with the 1927 Nebraska bread law we would have to take into consideration the evaporation after the loaf is baked up to the time of delivery to the retailer or such time as we might consider safe after [fol. 134] baking and hence would have to ascertain the evaporation during that period no matter what the length of time. We have conducted tests to this extent: That under normal conditions in our plant where we have the very best condition for keeping bread and up to a 60-hour period after baking we have an absorption or decrease in weight of from 4 to 4½ ounces. The transportation of bread from our plant to the train, the condition in the express car and the conditions in the place to which it is sold have a great deal more effect on the evaporation than the conditions in our plant. What that effect would be on the evaporation process I could not tell. We don't make a practice of shipping bread that is 60 hours old. That condition comes about where it takes all the way from 12 to 24 hours to reach the customer. There are plenty of times that a retailer would have bread on hand for 60 hours. We don't make a practice of shipping bread that has been baked 60 hours as it wouldn't be fresh bread. If the bread reaches the customer at the end of 12 hours it is salable and usable if the evaporation is not too great. It may take from 12 to 24 hours for a shipment to reach a distant customer and there would be from 24 to 36 hours before he disposes of the bread. Say a customer wants a couple hundred loaves of bread and we don't have enough of today's bread to fill the order, we would, of course, make up the order with bread that was a little older and which

[fol. 135] bread would be in fairly good condition, but if condition of the temperature had been bad and if there had been too much evaporation, there would be quite a shrinkage. Bread that has shrunk in weight 4½ to 5 ounces to a pound is not what is called fresh bread. I would say that 12% shrinkage can be allowed for fresh bread which would be about 2 ounces in 16 ounces, and a 2-ounce allowance for evaporation could be made.

Redirect examination:

The loaf after it dries out has the same solid food content as before the moisture evaporated, but it would not be so palatable and hence not so salable. When I spoke of $43,000 necessary for additional equipment, and so on, I meant $43,000 more than the cost at present.

We do not bake on Saturday, but we receive and fill orders for bread on Sunday, and we fill those orders from the baking of Friday afternoon and Friday evening, and the bread does not reach the dealer until Monday morning, which, in some instances, would be 65 hours after the bread was baked, and we can't control the weight of the loaves during all that period. We have no control over the bread after it gets into the dealer's place of business. I know that bread in dealers' places is mostly exposed for sale on the counters where it is subject to all the conditions that prevail in the atmosphere.

[fol. 136] Recross-examination:

Bread which has shrunk 3½ ounces per pound would be eatable and usable, but I wouldn't say as to whether the consumer would consider it palatable. After it gets dry it is not fresh bread. We have had complaints about not receiving fresh bread which to my knowledge would be fresh bread but the general conditions of the weather on the outside of our plant for which we are not liable, caused a condition where it makes the bread firm and solid and thus would make fresh bread seem as though it were stale. That wouldn't occur before it left our plant. That would be due to shrinkage and the greater shrinkage of the bread in the express car or in the baggage room at the station or on the station platform. Those complaints were usually because of the conditions caused by the negligence of the employer or his employees.

Redirect examination:

The Quaker Baking Company has a paid up capital stock of $134,000 and with its predecessor has been doing business since 1905. The annual output is nearly three million loaves of bread with a value of about $225,000.

Recross-examination:

About 50% of the bread, I should say, was sold and delivered in Nebraska.

[fol. 137] P. F. PETERSEN

Direct examination:

I am president of P. F. Petersen Baking Co., a corporation organized under the laws of Nebraska with a paid up capital stock of $200,000. I started in business in 1890 as an individual and incorporated in 1893. The company's products are sold throughout Nebraska and surrounding States. The annual output is about twelve million loaves of a value of about one million dollars. I am a practical baker and got my training in Denmark. Have been in the United States 46 years and have been connected with the baking business all that time except 7 years. Have been actively in the baking business since 1893, and I am familiar with the modern methods of baking bread and the quality of bread which the people of Nebraska demand.

We ship bread as far as Harrison, Nebraska, which is about 500 miles from Omaha. We ship almost daily to many far away points in Nebraska because the people want fresh bread. Our bakery is closed on Saturdays but we receive and fill orders for bread on Sunday. Occasionally we have to fill Sunday's orders with the bread baked on Friday. Any bread, of course, that becomes illegal under the 1927 Nebraska bread law will have to go to waste.

The people of Nebraska demand the very highest grade of bread which requires the highest quality of all ingredients that goes into the dough mixture. The highest [fol. 138] quality of ingredients used in making up dough contains more moisture than the lowest quality of such ingredients. The highest grade of flour will absorb more

water or moisture than the lower grades. The high grades will absorb 63% of water. In our own business we use the highest quality of flour because it absorbs more moisture and makes a better loaf of bread. Flour contains a lot of starch and is graded in price according to its protein content. It takes moisture and heat to explode the little bags containing the starch and unless these bags are exploded it does not make a good loaf of bread. The best bread has all of the little bags of cellulose broken, and it takes heat and moisture to bring about the explosion of these little bags. It requires a lot of moisture because all the heat in the world by itself would not explode them. If the dough contains the proper amount of moisture, then there is perfect explosion of the starch bags and there is a good loaf of bread.

There is evaporation of moisture from the dough before it is put in the oven as evaporation commences from the time the dough is mixed. Bakers cannot accurately determine just what percentage of moisture will evaporate from the time the dough is mixed until it is put in the oven but we have a machine where we create our own weather, so to speak, so that the dough during fermentation will lose scarcely any moisture. We control the temperature there [fol. 139] by mechanical means. The dough is separated by a dough divider into dough loaves before it goes into the oven, but the dough being in a rapid stage of fermentation, has little air bubbles and the pieces of dough on the outside will be a little scantier than those on the inside which makes a little variation in the size of the dough loaves before they go into the oven, and there is greater variation of moisture in the larger lumps of dough than in the smaller lumps, and the lumps of dough when baked into bread will not be equal in weight or size and cannot be made so. It is not possible to bake loaves in the oven the same length of time because the first loaves in are the last ones cut and hence undergo a longer baking process than the others and naturally there is more evaporation of moisture out of those that stay in the oven the longest. Degrees of heat in the modern baking ovens vary also which has an effect on the evaporation in the loaves in the oven. In order to make the highest quality of bread we must have the largest quantity of moisture together with the heat in order to rupture the starch cells

about which I have spoken, and the best bread has all those starch cells broken.

Under present day circumstances of baking and selling bread there will be times when quite a long interval elapses between the baking process of the bread and the delivery of that bread to the dealers—48 hours or more. Bread is [fol. 140] transported over the State of Nebraska in express cars which usually leave at night. Bread shipped on Sunday does not reach the dealer until Monday morning, which will be 50 or 60 hours after baking, and under the 1927 bread law all of that bread must be of legal weight for 12 hours after it is delivered to the dealer on Monday morning. I know of no method whereby bakers can control the amount of evaporation in the bread from the time it comes out of the oven until 12 hours after it has reached the dealer. Natural conditions are beyond our control.

Oluf Petersen is the superintendent of our baking department. He is a graduate of the American Institute of Baking in Chicago, which is the highest in bakery colleges in this country. I consider him an expert baker. I know that in making his experiments he used only the regular method which we have employed for years in making bread. In our plant the product is quite uniform because we use about the same brands of flour and of other ingredients. There are just as many qualities of bread as there are bakers. Each baker has his own individual formula and there is no real comparison as to the value of any two loaves that are made. The better the quality of the bread the faster does the moisture evaporate. We can bake a loaf of bread which will have little evaporation and remain the same weight for a great length of time by using a poor [fol. 141] quality of ingredients because it is the poorest bread that has the least evaporation. Some kinds of bread, such as Pumpernickle, have scarcely any evaporation. It is as hard or as dense as a brick but it is not a popular bread. The demand is for the best quality of bread and that in turn is made from the best quality of ingredients. Some of the things which contribute to the unavoidable and uncontrollable variations in the weights of loaves as they come out of the oven are the water content of the wheat, the flour and the dough. Flour can contain 14% of moisture under the law but we keep it down to 10 or

9%. Then the gluten content of the flour requires more water in proportion to its rich quality. Exact weights and measurements of the dough before entering the oven cannot be attained under known existing processes because the dough is in a high state of fermentation where it bubbles and boils and that process is going on all the time. There are losses in weight while the dough is being mixed and during fermentation and while the bread is in the oven. To get the best results there is a point in fermentation when the dough should be put in the oven but under practical conditions bakers are not able to always put the dough in the oven at that exact point. Our plant is synchronized.

The conditions including the time when we deliver bread to the transportation companies and conditions which may [fol. 141½] prevail during transportation and the conditions which prevail in the dealers' stores for 12 hours after they get the bread are beyond our control.

We do lots of trucking in the country for, say, 130 miles and in the summer season the trucks get so hot that there is a great deal of evaporation in the bread on these trucks. The trucks act as condensers of the heat. Let me add that express cars in the wintertime are heated and in the summertime they get very hot, and hence bread in transit in such cars loses a great deal of moisture.

We could always scale any given lump of dough so that under all like conditions of baking and selling the loaves in 5 or 10 pound lots would always be not less than 16 ounces to the pound loaf, but bearing in mind the maximum feature requiring pound loaves not to exceed 19½ ounces when they come out of the oven, if we try to be within the maximum then we are liable to have that bread violate the minimum feature of the law. In other words, if we scale the dough so that we may always be within the minimum weight of the law, we may under the conditions which prevail here in Nebraska have a loaf which is too large and above the maximum, and it is the maximum feature which is the objectionable feature to the 1927 bread law.

The food value of the loaf is not affected in the silghtest degree by the evaporation of moisture but the practical [fol. 142] question of palatability confronts us bakers at all times because the fresh, moist bread is the most pal-

atable. Heretofore, to meet the increase in price of ingredients we would decrease the size of the loaf and when the price of ingredients came down the loaf went up in size. During the war when flour went up to $17 a barrel, loaves were made as low as 11 ounces. There never was any complaint about that method so far as I know. There is no demand among the dealers or the consumers of bread in Nebraska for a standard weight loaf so far as I ever heard. The main demand is for quality in the bread and by varying the size of the loaf we can at all times preserve the equilibrium in the variation in the cost of ingredients whether that cost is up or down. To meet the increase in the price of ingredients in bread under the 1927 bread law we would have to raise the price of bread to the dealers, and as one cent is the lowest unit of money in use, an increase of one cent will give a greater proportion of profit to the baker than otherwise he would have as the consumer will have to pay a greater amount than before. I think we have never made more than 10% profit on bread and frequently it is much below that, much less than half 10%. Custom has fixed the prices of bread at 10¢ for the pound loaf and 15¢ for the pound and a half loaf, and we have always been able to maintain such retail [fol. 143] prices by fluctuating the size of the loaf in accordance with the cost of ingredients in bread. Under this new law we couldn't do that.

Bread baked locally in the small communities is sold usually over the counter within a few hours after being baked, and such local baker can work on a much closer margin of dough than the wholesale baker so the small baker has that advantage over the wholesale baker. Under the new law, loaves of illegal weight will be a practical waste as — will have to sell them to the hog men for a cent a pound where we get 8¢ from the greater proportion of our dealers, so there would be a 7¢ loss on each pound loaf of bread. I don't know of any way that this loss can be prevented. The enforcement of the 1927 bread law will mean a loss to every one of us wholesale bakers and the loss will run into thousands of dollars, certainly more than $3,000. If we should attempt to put on the market a bread made of cheap ingredients which are dry and have scarcely any moisture in them and thus would not dry out like bread of good quality, our customers would refuse to accept such

bread. The public is very sensitive to quality of bread and would not buy the cheap bread which you mention, thus entailing a loss to us. The consumer usually buys bread daily and one or two loaves at a time, hence we have to ship bread every day in the year. There are great varia- [fol. 144] tions in temperature in Nebraska both in summer and in winter, and the variations come frequently very quickly.

P. F. Petersen—Cross-examination:

In our own plant we can control the conditions of humidity and temperature fairly well. We can control the humidity in the cooling room if the windows could be kept closed but when the bread gets to the shipping room, especially in the summer time when all the windows and doors are open and when the hot dry air fairly sops up the humidity, then evaporation begins. We do not intend to keep bread in our bakery 48 hours but it occasionally happens that we do. We try to keep such bread in the very best state of preservation so it will please the customers by being fresh bread. We would not ship such bread to the farthermost points in Nebraska if we could do otherwise. We intend to give all our customers no matter where located, fresh bread which will remain fresh in their hands for 12 hours, and if we didn't do that we would lose our trade. They would buy from some baker closer to them in that case. We have not often lost any customers on account of delivering stale bread. While we do not bake on Saturday, yet bread is baked as late as 3 A. M. on Saturday morning and we do not bake again until midnight between Saturday and Sunday. About 21 hours when we are not baking bread. [fol. 145] The 3 A. M. Saturday bread is kept in fairly good state of preservation by care without it being called exactly fresh bread. It is usable bread.

We operate our own trucks every day except Sundays. Some make a round trip of 130 miles. They go out in from 4 to 6 hours, I think about 6 hours. The trucks are specially constructed for transporting bread so as to keep out the sunlight and shed water and enable us to deliver bread in as fresh condition as possible.

Under the 1927 Nebraska bread law in the worse conditions of baking we may violate the law on both sides. That is, the bread may be overweight when baked and if it is

exposed long enough in this dry climate it could easily go below 15 ounces to the pound, so it would be an illegal loaf again. If somebody saw fit to dry out a loaf of bread on you and call in an inspector, you would be fined. I had a case of that kind once where a small storekeeper in Omaha wanted to borrow some money from me. I refused him. He dried out my bread on the stove and called in an inspector and I was fined in Court by reason of the action of this man. Under the law there are enough chances of uncertainty about the weights of loaves of bread. If an inspector should get hold of 10 loaves of bread that would be either above or below the legal weight, we would be in hot water half the time on a tolerance of 4½ ounces. In an industry like ours we should not be subject to arbitrary measures [fol. 146] that are both unjust and unfair because competition will keep the prices and the quality just to the highest standard. Bakers do not all charge the same price for bread. By standardized price is meant 5¢ or 10¢ or 15¢ for the best grades of bread at retail. There was a time when the loaf that now sells for 15¢ was selling at 5¢, but that was at the time when nickel cigars were smoked. Everything is now on a different standard. I used to pay $11 a week for a baker and now I pay him $80 a week. During my time the bakers have fluctuated not only the weight of the loaves but also the price. This new law by fixing the size of the loaf and leaving to the baker the right to fix his own price would be a handicap on the industry that would be hard to overcome because you might on every morning or each week have to fix a different price which would be hard to assimilate. It would keep the industry from flowing as freely as if you had it the other way around. Gasoline and oil and boots and shoes vary in price but bread is closer to the people's hearts. Parents send the little children down to the store with a dime for a loaf or bread and if the dealer says "It is 11¢ today," then there is a disturbance in the easy flow of the business all along the line which would be a great handicap on the dealers. I can't see any good either for the public or for anybody else in an arrangement whereby the price of bread is constantly changing. It would be rubbing the fur the [fol. 147] wrong way. A portion of a baker's output would always comply with the law but there would always be a slip somewhere along the line that would get the baker into hot water.

I had nothing to do with the tests made by Oluf Petersen. I did not tell him how to make them.

We have no objection to the minimum feature of the law. We have in times past sold very large loaves weighing much more than a pound for pound loaves. There is great competition to see who will make the largest loaf for the price. There was never a time when the consuming public buying loaves of bread from retailers, would be deceived by loaves of bread that would be too large to be pound loaves but not large enough to be pound and a half loaves. I never heard of any such contention. We have a little loss from stale bread in the summertime. We know in a general way what our daily sales will be but in running a business of the magnitude of ours a rainy day makes a big difference in the sale of our merchandise. If each driver of the 30 trucks brings back $4 or $5 worth of merchandise, it amounts to a lot in the aggregate. Most of our competitors would have more trouble than us with a tolerance of 4½ ounces per pound but we also would have trouble to meet the law.

P. F. Petersen—Redirect examination:

If we kept the doors and windows of our cooling room closed there would not be so much evaporation but it would [fol. 148] be impossible for men working in that department to remain comfortable. We have ventilators installed in order to obtain fresh air because otherwise it would be impossible for the men to stay in the room. The heat would dry out the humidity. We also have girls in that room and if the windows and doors were closed they could not stand it in there. We have hundreds of times delivered bread which was 48 hours old. We cannot determine beforehand what the demand for bread on a certain day will be. A rainy day or a stormy day ruins the business.

Edward B. Foster, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am assistant manager for the Gooch Food Products Company, Lincoln, Nebraska. It is a Nebraska corporation with a capital stock of $800,000. I have been with the com-

pany 18 years. The annual output of loaves of bread manufactured by it is about 2½ million loaves of a value of about $200,000. To comply with the provisions of the 1927 Nebraska bread law will cost the company approximately an extra sum of $15,000 per year. The company expects to remain in business for 10 years and we hope forever. Our bakery is closed on Saturday. It is the custom among commercial or wholesale bakers to close the plant for cleaning [fol. 149] up purposes, etc., on Saturday of each week. The last bread is baked on Friday night.

I know from my knowledge of the bread business that under certain conditions of the weather there is great evaporation of moisture from bread, and there is no method known to us bakers for controlling the natural elements of heat and moisture in the air which affect bread. We have no control over the cars of the express company which transport the bread nor over the conditions of the atmosphere in the stores where the dealers keep their bread.

If we should not use the best quality of ingredients that would make a poorer quality of bread and the housewife would at once start baking her own bread just as some of them are doing now. The dealers wouldn't sell the poor bread and if we took it back we wouldn't be able to sell it and that would entail a great loss as our price of bread to the dealers is about 8¢ a pound and we would have to sell this illegal bread to hog feeders at one cent a pound, and that would aggregate I would say between $5,000 and $10,000. In the service stores in Nebraska it has become the custom to sell a pound loaf of bread at 10¢ and a pound and a half loaf for 15¢. By service stores I mean the ordinary grocery stores which deliver the goods to customers. Under the present arrangement when the price of ingredients in bread increases, we lessen the weight of the dough [fol. 150] loaf and if the price of ingredients lowers, we increase the dough loaf so that the standard prices are maintained by increasing or decreasing the weight of the loaf to meet the variation in the market prices of ingredients.

Edward B. Foster—Cross-examination:

Our profit for a number of years has been standardized, or very nearly so. It has been nearly the same for the last three years. Prior to that we had our good and bad years, for instance in 1920 it was a poor year. We have not al-

ways made the same percentage of profit. That has fluctuated except for the last three years. We always fluctuate the size of the loaf to meet the fluctuation in the cost of the ingredients. We always put the weight back in the bread when the price of ingredients lowers. That does not make a standard profit because we don't always sell the same number or kind of loaves. For instance, we might not sell the same number of one and a half pound loaves of bread this year as we sold last year. There is no standardized profit but it has happened that the profit has been about the same for the last three years. If the cost of ingredients is high, we lower our scale weights and if the cost goes down again we scale the dough heavier again. We contend that it is necessary to fluctuate the size of the loaf in order to meet the increase or decrease in the cost of the ingredients. We know when the bread is costing us [fol. 151] more than it had cost before and we automatically reduce the scaling weight to cover that cost. We try to keep the same margin of profit although like everybody else we endeavor to make as much profit as possible. If we can make 10% this month or cut down our cost next month, we do it. It is very hard to fluctuate the price. The public demands good bread. We cannot fluctuate both size of the loaf and price to the consuming public because it is too hard to change the price. There are local bakers in every town but not wholesale bakers or shipping bakers. The local bakers are always competitors of the wholesale bakers. We have no trouble in competing with the local bakers. We don't compete with the local baker on freshness but on quality, and the consuming public buys our bread.

When I said that our company would lose $15,000 annually on account of the additional cost to the company to comply with the 1927 bread law, I based that entirely upon the fact that we would have to put extra dough in the scaled weight which would mean more ingredients in the loaf of bread which reaches the consumer but the consumer would have to pay more for it. He doesn't get any more in proportion. Competition rules the price. This would affect all the bakers of quality bread. If they have to put more ingredients in the bread they are going to cheapen the loaf and when they do that they are [fol. 152] not giving the customer the quality. If you give quality bread you must get the money for it or otherwise

lose. We get more for our bread than some others. We could still put out a quality loaf of bread and lose money on it. Our profit would not be as big if we had a standard loaf. There is nothing in the law that prevents us from charging any price we may wish to fix but competition determines that price. Competitors may compete also by selling a larger loaf but on account of the poorer quality it does not cost them as much as a quality loaf of smaller weight. To some extent that phase of the industry is all a matter of competition. The consuming public has nothing to do with fixing the size of the loaf or the price which shall be charged for it.

EDGAR SCHULZE, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am manager of the Butternut Bread Company in Lincoln, Nebraska, which makes modern bread. I have been in the bread business 10 years. I know there is a great variation in the temperature throughout Nebraska in summer and winter. It is very changeable. I would say it is very difficult for bakers to always in all seasons of the year comply with the provisions of the 1927 Nebraska bread law, [fol. 153] that is, to be always under the maximum and over the minimum. In some of the tests we have made some of the loaves will comply with requirements and some will fall below, and there will be times during the year when we will have illegal loaves. We cannot control the temperature and humidity in the air at all times. We don't ship very much out through the state. We truck most of our bread as far as 50 miles from Lincoln. We cannot control the temperature or humidity in the stores where the bread is kept for sale. In the past year our raw material cost us something like $75,000. The highest we scale our one pound loaf is 19½ and 20 ounces. The evaporation of moisture is dependent altogether upon the condition of the weather. In a dry atmosphere there is more evaporation than in a wet atmosphere. The heat and humidity are very important factors in preserving bread. The consuming public has never made a demand for a pound loaf of bread that would not exceed 19½ ounces and not go below 16 ounces.

Bread is bought by the loaf and people want as much for their money as they can get. At present we regulate the size of the loaf by the price of ingredients, and that is the customary method among bakers. There has been no complaint from consumers concerning that method. It has been in force for years. I don't know of any reason for the enactment of the 1927 bread law. We have competition not only from the Lincoln bakers but also bakers throughout the towns in Nebraska in our territory. Our biggest com-
[fol. 154] petitors are from Omaha. There are small bakers in nearly every community who sell their bread over the counter. We have to compete with them. The local baker's bread is sold very shortly after baking, but we can't do that. We have to keep bread on hand at all times to meet the demands of our customers and for extra calls. We never can gauge the demand on any given day as that is an impossibility. There is more or less evaporation in bread we have on hand and that evaporation continues while bread is being transferred to the dealers' stores and we cannot control it.

Edgar Schulze—Cross-examination:

We bake four sizes of loaves. We try to judge the evaporation in the baking process so that the loaves will scale the approximate weights when they come out of the oven. We scale a 14 ounce loaf at about 17½ ounces of dough. A 16 ounce loaf is scaled at from 18 to 19 ounces of dough, and a 20 ounce loaf is scaled at about 23 ounces of dough. A 24 to 25 ounce loaf is scaled as high as 28 ounces of dough. We allow 3% shrinkage in the baking process, but very often, for instance a day like the present, we allow more dough to meet the shrinkage. Should it turn out to be a warm day, we may be several hundred pounds short of our requirements. We allow what we think will be lost in the baking process and the loaves when baked are very closely within the weights I have described. We differen-
[fol. 155] tiate between a 14 ounce loaf and a 16 ounce loaf. We scale dough and bake a loaf of bread that when baked has a variance of less than 2 ounces. We wrap our bread. I have seen tests made and have made tests and have found that the pound loaf had a greater shrinkage than 4½ ounces per pound at the end of 60 hours and 72 hours after baking.

The tests were made in the shop, and after the bread is baked it loses as much as 4½ ounces within 60 hours thereafter. The bread is salable. We have delivered bread 36 hours and 48 hours after baking and it was kept and sold as fresh bread and had the appearance of being fresh bread. I never made any tests out of a store. I have seen bread that has been sold at the end of 60 hours. A loaf when baked weighing 19½ ounces and which lost 4½ ounces has been sold as fresh bread. It is still usable and palatable but there is not very much demand for such bread and we don't attempt to sell such bread to our customers.

I have tried to make bread which would comply with the 1927 bread law and haven't been able to successfully accomplish it. The bread would stay within range for approximately 12 hours after baking and I found from my tests that the bread would stay within legal limits between the 10 and 15 hours. The bread would lose 4½ ounces by evaporation after it was baked 10 to 15 hours. I have no records with me at the present time. The bread I refer to was wholesome wheat bread. The ingredients were flour, [fol. 156] water, yeast, milk, salt, shortening, sugar and malt. 58 to 63% of water. A 19 ounce loaf would evaporate approximate 4½ ounces in 15 hours' time. I made my tests during the hottest days of the summer, I think in July, 1928. I kept the bread in the shipping room and the office in the places where it is ordinarily kept. The bread wasn't wrapped. It was exposed to the atmospheric conditions of the shop but not to any unusual conditions, just the ordinary shop conditions.

Harold D. Le Mar, a witness in behalf of the plaintiffs, testified as follows:

Direct examination:

I am secretary and treasurer of the P. F. Petersen Baking Company of Omaha, Nebraska, of which Mr. P. F. Petersen is president. I am familiar with the modern method of making the best bread in commercial bakeries. Ours is a commercial wholesale bakery. We ship throughout Nebraska and to five other states. We think we make

the best bread in Nebraska, but, of course, other bakers would make the same claim. We aim to make only a first quality of bread and we use the best quality of ingredients obtainable, as the best quality bread is demanded by the consuming public in Nebraska.

There has been no demand whatever from the consuming [fol. 157] public for any change in the existing custom of baking and selling bread. When the price of ingredients rises on the market the scaling weight of the dough is cut down proportionately, and when the price of ingredients lowers on the market the scaling weight is increased, and we are thereby enabled to manufacture and sell bread which is sold to the consumer at standard prices, which are 10¢ for the pound loaf and 15¢ for the one and a half pound loaf. Bread made of the best quality of ingredients is subject to the greatest evaporation, and if we should use cheaper ingredients for our bread in order to have less evaporation and thus try to comply with the 1927 law, the quality of the bread would not be so good.

The latest survey in Nebraska indicates that approximately one half of the bread consumed is produced by the housewives. In the City of Omaha only 20% of the bread consumed is made by the housewives. If we were to lower the quality of our bread, the remainder of the housewives would then start baking their own bread. Every housewife in Nebraska is a prospective competitor of ours.

We cannot always be certain of having legal loaves under the 1927 law because there is a large portion of the time when the baker has no control of the evaporation with any degree of certainty. Based upon the cost of materials for the last 12 months, to increase the scaling weights would increase our cost approximately $56,000 which is a 16½% [fol. 158] increase in the material cost over the present, that is, 16½% would be the increase upon a total cost of production, and on a loaf of bread it would amount to 7.19%. That increase at the present price of bread would wipe out the profit entirely and would leave a loss on every loaf of bread under the conditions that prevail, so the only alternative would be to increase the price. To preserve the present quality of bread there is no method known to bakers to preserve the equilibrium when the ingredients rise or fall in price than to lower or increase the size of

the respective loaves. If we used poorer ingredients and thus made a poorer quality of bread, we would lose our customers. If we must preserve a maximum and minimum weight loaf, then the price must be increased when costs increase, and as one cent is the lowest unit of money, the baker would for a time make an abnormal profit and the retailer would be in the same fix. The average purchase by the average family in Nebraska is one loaf at a time so the increase could not be a fraction of a cent but would be one cent, and the consumer stands the extra cost.

We cannot safely scale dough at more than 20½ ounces to the pound because the loaf when baked might be more than 19½ ounces. In a 20½ ounce dough loaf there are approximately 7½ ounces of moisture and 13 ounces of solids. The solids contain all the food value as there is no food value in the moisture, but the moisture affects [fol. 159] the palatability of the bread. A dry loaf is not so palatable as a moist loaf and that is the sole object in trying to produce loaves of moist bread. They are more palatable. There has never been any demand for any change in the existing method of baking and selling bread either as to price or weight. There are great variations in temperature in Nebraska, especially in the summer —great variations both in heat and humidity, which are the two elements to be considered when we speak of evaporation. If we were to use cheaper materials in our bread, the bread would not be of as good quality and would not contain the food value. It would not have the keeping qualities of a loaf made of pure ingredients. On account of the starch in cheaper qualities of flours used in baking, bread made therefrom would be indigestible for certain persons. In baking bread in order to get the most digestible bread, the starch cells must be ruptured and if they are not, then to that extent the product is an indigestible bread. The best quality of bread made out of the best ingredients contains the most moisture, and there is, therefore, in the commercial wholesale bread more evaporation in a given time than there is in the cheaper quality of bread made by the small bakeries throughout the State.

I think that the P. F. Petersen Baking Company is likely to continue in business for at least 10 years. It has been in business in Omaha with its predecessors for 38 years.

[fol. 160] There is no way known to the wholesale commercial bakers of Nebraska whereby at all seasons of the year, under all the conditions that prevail, we can make a good quality of bread which for the time specified in the 1927 bread law will always be within that law. At times in spite of anything we can do, we will be liable to prosecution, and that is true of our dealers. In the practical working out of this 1927 bread law in Nebraska there is no material difference between it and the 1921 bread law except that, if anything, the 1927 bread law is a little more stringent than the 1921 law owing to the fact that they tacked on to the 1927 law the additional time provision which says we are liable for the weights of bread for 12 hours after delivery to the dealers. I don't know of any way that we can shorten the time now required to get to the furthermost retail dealers in Nebraska.

Harold D. LeMar—Cross-examination:

When I mentioned 7½ ounces of moisture I had in mind a 19½ ounce baked loaf. 7½ ounces would be water and the 12 ounces would be solids. The scaling weight was 21½ ounces of dough. There were 12.74 ounces of solids and the balance was moisture, which would be 9.04 ounces of moisture. When baked, the loaf weighed 19½ ounces—7.04 ounces of moisture and 12.46 ounces of solids. The loaf lost nothing of the solids in the baking process, but [fol. 161] would lose approximately 2 ounces in moisture—slightly more than that under certain conditions. In a pound loaf there are 7.04 ounces of moisture when the loaf is baked. In a pound loaf with a 3½ ounce tolerance 3.54 ounces of moisture might be left in the loaf and the loaf would be fresh, merchantable bread depending entirely on how rapidly the moisture would be evaporated. If 3½ ounces of moisture has been evaporated there is 3.54 ounces of moisture left in the loaf and 12.46 ounces of solids. The bread would be fresh bread under certain conditions but under others it wouldn't be. After the evaporation process takes place over a period of 3 to 5 days that bread might be considered stale bread. If the evaporation should take place for a short length of time that bread would still be fresh and salable as such—say, 24 hours, and if it doesn't lose

for a period of 60 hours to 72 hours it would be proportionately fresh bread, and we do sell such bread under certain circumstances practically every week to our customers. We have no trouble competing with our competitors in the far points as to the freshness of our bread. I am sure our bread loses 3½ ounces but our customers are buying our bread not because of the amount of the moisture in it but because of the quality. If it loses enough moisture to become dry and stale bread, it wouldn't be as palatable, but they buy such bread. There are seasons of the year when the evaporation of bread in 60 hours will not amount [fol. 162] to 3½ ounces, and there are other seasons when it will amount to more. These seasons are not necessarily in summer. There are times when the humidity is low whether it be summer or winter, and when the atmosphere is dry and the moisture evaporation is the greatest. It follows natural law and the tendency in nature is for things to equalize themselves and the moisture in the loaves of bread equalizes itself with the moisture contained in the atmosphere that surrounds it. Under the 1927 law the consumer would get a larger loaf but he would have to pay more for it or else there would be a resulting loss to the baker. Not all bakeries would have to put more dough in their bread as the little baker who sells within 3 or 4 hours after baking wouldn't have to add that much weight to his dough, but the wholesale baker who ships would have to add the weight and, consequently, would be at a disadvantage. This statement is made upon the supposition that the law means that the tolerance should apply for a period of 12 hours after delivery to the retailer.

Harold D. LeMar—Redirect examination:

In making the estimate of bread in Nebraska, we estimated that the commercial bakers produced about 175,000 loaves per day for local consumption out of a total of somewhere in the neighborhood of 350,000 sold by the dealers in the State, and the plaintiffs in this case are producing approximately 120,000 of those loaves per day.

[fol. 163] PLFFS. EX. 2

Evaporation Tests

Unwrapped Bread

P. F. Petersen Baking Co. Oluf Petersen, Baker

Tests June 16, 1927

No.	Scaling weight	Baked weight	6 Hrs.	12 Hrs.	18 Hrs.	24 Hrs.	30 Hrs.
1	27 oz.	24½	23½	23	21½	20	19
2	27	24½	23½	23	21½	20	19
3	27	25	23½	22	21½	20	19
4	27	24½	23½	22	21½	20	19
5	27	24½	23½	22¾	21¾	20½	19¼
6	27	24½	23¼	22	21½	20	19
7	27	24¼	23	22	21½	20	19
8	27	24½	23¼	22	21¼	20	19
9	27	25	23¼	22	21¼	20	19
10	27	24¾	23	22	21¼	20	19
11	27	24½	23	22	21¼	20	19
12	27	25	23	22	21	20	19

Vienna Bread, Unwrapped

2.	1–3	19	16½	15½	14	13	12½	11¾
	4–5	19	16½	15¼	14	13	12½	11¾
	6	19	16½	15½	14½	13¼	12¾	12
	7–9	19	16½	15¼	14	13	12	11¼
	10	19	16½	15	13¾	12½	12	11¼
	11	19	16½	15¼	14	13	12¼	11½
	12	19	16½	15½	14¼	13	12¼	11½

Tests June 20, 1927

1	22½	20	19	18	17½	17	16¼
2	22½	20	19	18	17½	17	16¼
3	22½	20¼	19¼	18¼	17½	17	16¼
4	22½	20	19	18	17¼	16¾	16
5	22½	20¼	19¼	18¼	17¾	17	16¼
6	22½	20	19	18	17½	17	16¼
7	22½	20¼	19¼	18¼	17½	17	16¼
8	22½	20	19	18	17½	17	16¼
9	22½	20¼	19¼	18¼	17¾	17	16½
10	22½	20	19	18	17½	17	16¼
11	22½	20	19	18	17½	17	16½
12	22½	19¾	18¾	18	17¼	17	16⅛

Round Top Loaves

No.	When baked	12 Hrs. after baked	24 Hrs. after	36 Hrs. after	48 Hrs. after	60 Hrs. after
4. 1	19¾	18	17	16	15¾	15¼
2	19¾	18	17	16	15½	15¼
3	19½	18¼	17⅛	16⅛	15½	15
4	19½	18¼	17¼	16⅛	15½	15
5	19½	18¼	17¼	16	15	14¾
6	19½	18¼	17⅛	16	15½	14¾
7	19½	18	17	16	15¾	14½
8	19¾	18¼	17⅛	16⅛	15½	15
9	19¾	18¼	17⅛	16	15½	15
10	19½	18	16¾	15¾	15¼	14¾
11	19½	18	17	15¾	15	14½
12	19¾	18	17	16	15¼	14¾

[fol. 164]

	No.	After baking	12 Hrs.	24 Hrs.	36 Hrs.	48 Hrs.	60 Hrs.
				Wrapped Bread			
5.	1	17	16¼	15½	15	14¾	14¼
	2	17	16⅛	15½	15	14¾	14¼
	3	17	16⅛	15¼	14¾	14½	14
	4	17	16⅛	15¼	14¾	14⅛	13¾
	5	17½	16½	15¾	15	14½	13⅞
	6	17¼	16¼	15½	14¾	14¼	13¾
	7	17½	16½	15¾	15	14½	14
	8	17	16	15¼	14½	14	13½
	9	17⅛	16	15¼	14½	14	13⅝
	10	17	16	15¼	14½	14	13¼
	11	17½	16¼	15½	14¾	14¼	13½
	12	17¼	16	15¼	14¾	14⅛	13½
				Vienna Bread			
	1	17½	15¼	14	13½	13¼	13
	2	17½	15¼	14	13½	13¼	13
	3	17½	15¼	14	13½	13⅛	13
6.	4	17¾	15¾	14⅛	13⅝	13⅜	13⅛
	5	17¾	15¾	14⅛	13¼	13⅛	13
	6	17½	15⅛	14	13½	13⅛	13
	7	17¼	15⅛	14	13½	13¼	13⅛
	8	17½	15¼	14⅛	13¾	13½	13¼
	9	17¾	15½	14¾	13½	13¼	13⅛
	10	17¼	15¼	14⅛	13½	13¼	13⅛
	11	17¼	15⅛	14	13¾	13½	13¼
	12	17¼	15⅛	14	13¾	13½	13¼

[fol. 165] EVIDENCE PRESENTED IN BEHALF OF DEFENDANTS IN THE CASE OF JAY BURNS BAKING COMPANY ET AL. VS. CHARLES W. BRYAN, AS GOVERNOR OF THE STATE OF NEBRASKA ET AL.

WILLIAM F. CLUETT, a witness in behalf of the defendants, testified as follows:

Direct examination:

I am Chief Deputy Inspector of Weights and Measures for Chicago. The ordinance marked Exhibit A was in force in Chicago from March 24, 1914, to August 4, 1918, when it was repealed, that is, certain sections, the amended sections made in 1918 being 188, 190, 191 (Exhibit B). There is an ordinance in process of passage at this time marked Exhibit C. The bakers generally in Chicago complied with the ordinance (Ex. A). My department made frequent inspections and found very few violations as to weight of bread.

There are about 5,000 bakeries in Chicago and there was about the same number in 1918 and at least 4,000 in 1911.

We found very few violations of Exhibit B as to the weight of bread. In Exhibit C, the ordinance not yet passed, the three-quarter pound loaf is stricken out and in place of it is the half pound loaf, but outside of that the weights are the same as now existing. Under the new ordinance [fol. 166] the tolerance is one ounce per pound under or one ounce over the 16 ounces. In Exhibit B, the one pound loaf could not weigh less than 16 ounces nor more than 17 ounces, and the other weights proportionately, being a tolerance of one ounce to the pound. The bakers were able to bake their bread within the one ounce tolerance. Under Exhibit B the inspectors of bakeries and places where bread was sold would try out the loaves of bread at the time of inspection. There were a few prosecutions for violations of the law which were mostly for wrong labeling. I found very little trouble among the bakers in complying with the bread weight law. I think the bakers can comply with the law by paying proper attention to the scaling of their dough before it goes into the oven. I think a two ounce tolerance is large.

Most of the trouble with the bakers was on account of mislabeling. Bakers made no complaint that the one ounce tolerance was insufficient A two ounce tolerance is a very larger tolerance. They would bring it down a good deal closer than that. The new ordinance of Chicago 1921, provides for a tolerance of one ounce per pound either under or above the standard unit in an average of twelve loaves.

Cross-examination:

In 1911 I think there were from 25 to 50 wholesale bakeries out of the 4,000 bakeries in Chicago. I had about 15 inspectors and the same number in 1914, and we now have about 21, and part of their duties is to inspect bakeries. [fol. 167] They are divided up. Some of the inspectors attend to testing scales and measures and weighing devices; other inspectors follow up coal and ice and hay and grain dealers. I think in 1911 we had about eight men that might be called inspectors of bread and other commodities in the different stores and bakeries in Chicago. Today we have only about four men detailed for that work, that is, investigating bakeries and groceries to determine whether or not the standard weight bread law is being complied with.

Bread is weighed up wherever it is found, such as in grocery stores, delicatessen stores and bakeries. About 15,000 of the smaller dealers handle bread in some way. We have about 200 square miles of territory in Chicago to cover and only a few men with which to do it. So the men might inspect one place three or four times a years or maybe only once a year, and some of the places might be overlooked. I am not a practical baker and only as a layman do I know anything about the method of making bread and of its ingredients. I know whether bread tastes good or not, but as to the technical requirements I have no knowledge. The violations that came in were mostly for wrong labeling. The purchaser was not cheated, but he would have his intelligence insulted. He would find a three-quarter pound label on a three-quarter pound loaf selling for 5¢, and he would find a three-quarter pound label on a two pound loaf selling for something else. The only de- [fol. 168] pendable information in the label was that the bread was baked by a certain party whose name was shown on the label and that the bread was made by union bakers because the label had a certain stamp on it. "That was our main trouble, that the union bakers did not care so much about what the label stated as long as it had the union stamp on it, and they were careless about picking out the labels to put on the loaves." They were not interested in their quality or weight, but they wanted the business unionized. They would have the different labels in different boxes adjoining each other, and if they were requiring three quarter pound labels they would be just as liable to stick their hand into one of the other boxes and so get a wrong label, but it wouldn't make any difference as long as the union stamp was on it. The purchaser could see just what weight of bread he was buying according to its label. The reason we cut out the three-quarter pound loaf under Exhibit C was because its weight is hard to test by the eye and you have to put it on a scale to tell the difference between it and a pound loaf. If the loaf is labeled correctly, however, there would be no chance of the purchaser being misled as that would identify the loaf, or the purchaser could have it weighed when buying it.

The only objection to giving the purchaser 17½ ounces of bread when he is buying a pound loaf is that the baker is [fol. 169] getting away from the standard sizes. That is

the only object, because it is contrary to law. There is no objection from a commercial standpoint or a human standpoint or any other standpoint. There can be no objection to giving a man a little more than he is paying for if the dealer or baker wants to do it. I do not see that the public can be injured in any way if it gets more bread than the label specifies. The main object of the ordinance is to prevent short weight so that a purchaser may not think he is buying a loaf of a certain weight when he actually gets a loaf of a less weight. I do not know about the moisture content of bread. We have never gone into anything like that nor anything connected with the technical manufacture of bread, nor the ingredients that enter into it. Under the new ordinance, (Ex. C) 12 loaves of a pound label must weigh 12 pounds. Six might weight 15½ ounces and the other six might weigh 16½ ounces, but together they would have to make exactly 12 pounds. If together they should weigh 12 pounds 6 ounces, then that would be a violation of the law, or even if they weighed together 12 pounds and one ounce, that would be a technical violation of the law. Under the law they must average out the correct net weight on the 12 loaves, that is 12 pounds. The change in tolerance in Exhibit C was made simply in the interest of uniformity and because the bakers made a request for such ordinance. There has been no demand on the part of the bakers to [fol. 170] eliminate the three quarter pound loaf, but they were agreeable to it. There wasn't any demand on anybody's part that I know of to cut out the three-quarter pound loaf. This department requested that it be eliminated because it was so easy to confuse a three-quarter pound loaf with a one pound loaf by simply measuring it with the eye, but there has been no public demand for the changes. The bakers wanted more changes in the labeling provisions than anything else, because under the old law they had to have a label affixed to every loaf whether it was wrapped or not. The bakers wanted the privilege of marking the weight on the wrapped loaves in addition to having labels or stamps or pan impressions on the unwrapped loaves showing the weight. Their complaint was with reference to the mechanical method of affixing the weight on the loaf. If a purchaser should ask for a half pound of crackers and should get a package containing less than 8 ounces that would be a violation of the law, but

if the purchaser were given a package containing more than 8 ounces we would not pay any attention to that. The maximum weight as applied to bread does not apply to any other article of foodstuff. No other article has a maximum and a minimum.

If the other articles of foodstuffs, such as crackers and cakes and the like, are marked with the minimum weight allowed by law, we are not concerned with it under the existing law. There is in milk and cream bottles a toler- [fol. 171] ance of over and under capacity for the bottles, but that doesn't apply when the milk and cream is sold in bulk. One can only purchase a given number of ounces of bread by having the loaf cut correspondingly. Bread is a peculiar article. It is not like something else where it is made up in pieces and put into a package to be sold for so many pounds or ounces. Bread is baked into one mass—one loaf by itself and we think that the loaves should be certain prescribed weights and that bakers should not be allowed to bake any kind of a loaf they want simply by saying it is so many ounces and bake it to a certain size because people must be protected in the weight of the loaf that they are buying. If the baker or dealer gives the purchaser a little more bread than the purchaser has asked for the public may not suffer, but I think it is unfair competition. "As far as the customer getting more than he pays for, we have no objection to that, if the dealer wants to give it to him, well and good". In other words, the public is not being cheated if it gets more than it is paying for. We do not pay any attention to the quality of the loaf, as no matter who is the baker, we only consider the weight and the labeling, though the loaves may represent different qualities of bread or weights. During the war period I think the Government formulas were so specific that it was impossible to vary the grades of bread. I do not know about flour. My inspectors pay no attention to loaves containing starch or any other [fol. 172] ingredient so long as the loaves come up to the specified weights and are properly labeled. We are not concerned with the ingredients at all. I do not know whether a loaf containing 25% of corn starch is of equal food value with a loaf made of pure wheat flour or not. I know nothing about the quality of bread. The only thing we are interested in is the weight and the labeling, and

the ordinance simply provides that bread shall not contain any deleterious substance.

Redirect examination:

I think the old ordinance permitting a three-quarter pound loaf was subject to violation and a misleading fraud upon the public; because loaves slightly over three-quarters of a pound were sold for a pound as such a loaf might easily be mistaken for a pound loaf and particularly if it is a light loaf, and so correspondingly large. That was the reason for cutting out the three-quarter pound loaf, and that is the reason for the two ounce tolerance, one ounce above 16 ounces, and one ounce below 16 ounces.

Recross-examination:

Artificially increasing the moisture in loaves of bread will not be a violation of the law if the bread comes up to the legal weight at any time within the 12 hour period, no matter how that weight has been increased so long as the substance put in is not deleterious. My inspectors [fol. 173] have to depend upon the word of the bakers and dealers as to whether the bread is fresh or stale but we have no means of determining the fact and are obliged to take the word of the baker or the dealer. Their is no agreement as to when bread becomes stale, so we provided that the dealer should determine such fact in selling, but I do not know how the dealer can determine it except by the objections of his customers, and he will have to take the baker's word.

[fol. 174] DEFENDANTS' EXHIBIT 16

Defendants introduced Exhibit 16, which was a copy of an advertisement of the Jay Burns Baking Company which was published in the Omaha Bee, March 14, 1913. The exhibit in part is as follows:

"We actually Manufacture Our Own Weather at Our Bakery!

"The weather has always been a hard master to the baker. On clear days when the air is fresh the dough raises fine. But on a damp, heavy day the dough refuses to act just right and the bread is not up to quality.

"With the aid of the wonderful apparatus shown above we have absolute control over weather conditions in all parts of our wonderful bakery.

"No matter whether the sun is shining or the rain is pouring down, no matter whether the sultry breezes of summer or the icy blasts of winter constitute the weather out of doors, inside the dough-room at the Burns Bakery the air will always be just the right temperature.

* * * "This purified air is automatically tested. If too dry, moisture is added, if too damp, this air is dried; if too warm, it is cooled by refriegration; if too cool, it is warmed by steam. Day in and day out, the temperature and relative humidity of the air discharged from this 'humidifier' varies less than two per cent".

[fol. 175] DEFENDANTS' EXHIBIT 17

is a copy of an advertisement of the Petersen & Pegau Baking Company, as follows:

"Every breath of air that comes within the walls of any part of this Great Modern Bakery is thoroughly washed and purified every ten minutes. The temperature is likewise controlled year around. These details show to what care we go to insure the even quality of Hard Roll Bread."

[fol. 176] EVIDENCE IN BEHALF OF THE DEFENDANTS IN THE CASE OF P. F. PETERSEN BAKING COMPANY ET AL. VS. ARTHUR J. WEAVER, AS GOVERNOR OF THE STATE OF NEBRASKA ET AL.

JOHN W. HINES, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live in Chicago and am Vice President of Purity Bakeries Corporation. My company is incorporated. It has 53 wholesale bakery plants scattered about the United States, forty-two of which bake bread. I have been in the bakery business since 1901, and with Purity Bakeries Corporation for three years. Our nearest plants to Nebraska

are in Kansas City, St. Louis, Springfield and Sedalia—all in Missouri, and plants at Minneapolis and St. Paul. In the south and west we have plants at Dallas, Fort Worth, Houston, Beaumont and Wichita Falls in Texas and a plant in Muskogee, Oklahoma.

"Q. Does your company operate at all in the State of Nebraska?

A. I think not. I don't believe we sell any bread. We sell cake in Nebraska, not bread."

We operate in states which have standard weight bread [fol. 177] laws, and in cities which have such ordinances. We operate in Ohio, Indiana, Iowa. We sell in Kansas, but do not produce bread there. From my experience, I find that the sentiment of the baking industry is generally favorable to standard weight bread laws. My company favors such legislation. When my company has entered states having standard weights we have sustained no loss because of the necessity of conforming to the law. When we have already been operating in a State and such a law was passed, we sustained no loss because of it. On the contrary, I believe we have enjoyed certain benefits because of such laws and have enjoyed financial gain because of standardization of bread weights. It helps us to standardize production, machinery, pans, wrappers, etc.

We have experimented in our plants with a loaf which weighed 20 oz. baked and compared it with the 24 oz. loaf. We found that we secured a greater number of pounds per hour per man where we had standard weights. We found that we could get as many 24 oz. loaves into the oven as the 20 oz., and that the men could handle them just as fast. It has been our experience that we have less obsolete wrappers in plants where we have standard weights. We feel that we get a greater amount of good will through standard weight than we had without standard weights. We believe that standard weights tend very strongly towards fairness in competition.

[fol. 178] "A. Well, we believe that the standard weights tend very strongly toward more fairness, you might say, in competition, or with competitors. By that, I mean if standardized weights prevail, we know at least where our competition stands in so far as weights are concerned."

There is a difference in the weight at which we scale the dough in plants in different sections of the country, because some have standard weights and others do not. In the states having standard weight laws we scale the dough at about the same weight. For example, we scale our dough at 18 ounces for a pound loaf in Texas. This loaf weighs 16 ounces when baked. This loaf scaled at 16 ounces remains a legal loaf during the time required in that state. The same thing holds true in the states of Iowa, Minnesota, Indiana, and Ohio. We have never found it necessary to take into account the temperature or humidity of a state in determining at what figure to scale the dough in order to have a legal loaf. We wrap most of our bread. At some plants we ship our bread some distance; and we also transport our bread by truck from the plant to the store doors. Most of this bread is wrapped. For long distance ship- [fol. 179] ments, with our company the prevailing custom is very strongly in favor of wrapped bread.

"Q. Was that true, four or five years ago, or is it a more recent development in the baking industry?

A. With reference to wrapping?

Q. Yes.

A. Well, I think it is truer today, so to speak, than it was four or five years ago. In other words, I think the tendency to wrap is on the increase."

We have experienced no difficulty in putting out and maintaining a legal loaf in the different states where they have standard weight laws. To my knowledge we have never been prosecuted anywhere for an illegal loaf where the weight was either above or below the standard weight. In my opinion, a spread of one ounce, a half ounce above and below, constitutes a fair tolerance, sufficient to make it possible for you to put out a standard weight loaf. I would say that one ounce is sufficient in the State of Texas, as well as in the State of Iowa. (In my opinion the tolerance should work both ways, part of it below and part of it above the standard weight. In other words, if a tolerance of one half ounce or one o-nce is allowed above the fixed weight an equal tolerance should be allowed below that weight. It would be as easy to obey the law and to secure and maintain a legal loaf, if the tolerance were all above the given weight, but in my opinion it would not be

as fair.) As far as being able to obey the law is concerned, [fol. 180] it would make no difference whether the standard fixed were twelve, sixteen, seventeen, or eighteen ounces. The only question involved is as to the spread or liberality of the tolerance. From our experience in Texas and the states near Nebraska, I would say that a half ounce above and a half ounce below the standard weight loaf would be sufficient in Nebraska.

"A. Well, it is my opinion that the tolerance should work both ways, what I might term above or below the line. If you are going to allow a tolerance of a half ounce or ounce above the weight, the same tolerance should be allowed below the weight. That relates to what you would say was fairness to the industry and to the public as well. I would say such a tolerance in my opinion would be adequate for wrapped breads, but for unwrapped breads such as Vienna and French, and so forth, I do not believe that tolerance would be adequate."

For unwrapped bread, such as Vienna and French, I believe the tolerance should be about twice that amount. In making my reply, I am taking into consideration the different conditions which one might encounter in retail stores and restaurants, as some of them might keep the bread near a stove or radiator. Bread dries out a little more in weight in the fall of the year when the weather is somewhat dry [fol. 181] and cool, than it does in the summer months when there is more humidity. I am referring mostly to the bread when in the bakery, and unless a humidifier is used, considering the place where bread is kept by retailers, I do not believe there would be much difference in the amount of evaporation in the winter months as compared to the summer months, "unless the retailer would keep the loaves close to a stove or a radiator or something like that." It is the rye, Vienna, and French breads that are commonly unwrapped. My company ships these breads both wrapped and unwrapped. From our experience, I would say that if bread were wrapped at the proper time in the shipping room, bread could be shipped in Nebraska at a distance of 450 miles, and that a spread of one ounce tolerance would be sufficient for shipping unwrapped bread.

"I might state we do not make any shipments of that distance, so maybe that is far fetched.

Q. Would your answer apply as well to deliveries on Monday as to other days of the week?

A. Well, the deliveries that we make on Mondays are made out of bread that is baked Sunday, rather early Sunday morning."

In some of our plants we close our bake- at six o'clock in the morning and in others, at twelve-thirty in the afternoon. I consider a loaf of bread twenty-four hours old as stale. I think that a loaf which is kept for seventy-two hours, under conditions as they might exist in Western Nebraska, would not be edible, salable, or palatable. I don't know whether or not the food value would still be in [fol. 182] the bread. I don't think I could answer that. Assuming that a loaf of bread were exposed for a large number of hours under adverse conditions and that it actually shrank three and one-half ounces to the pound loaf, I could not consider it salable.

"Q. Would you consider it edible?

A. No. Well, I am not qualified on that. It might be edible. I do not know how they are going to consume it. I do not think the loaf would be salable; I do not think people would be apt to buy it."

From my experience, I find the public demands fresh bread. The greatest demand is for bread baked from six to twelve hours. My company considers that when a loaf of bread is over twenty-four hours old it is stale. In cities where there is no law prohibiting the return of stale bread, we sell it to farmers for chicken feed. In States where the return is prohibited, it is kept by the retailer. It is my opinion that in those states where its return is prohibited, the retailer watches his bread much closer, "and gives more attention to the amount of bread that he purchases and makes greater efforts to dispose of the bread that he does buy."

The price of the ingredients does change from time to time, and before we had standard weight laws, the baker customarily changed the scaling weight. I am familiar with the argument of some bakers that standardization of bread weights is objectionable because a penny cannot be divided and the change in costs cannot be actually reflected [fol. 183] in the selling price. In my opinion there is no

such thing in the United States as a uniform or standard retail selling price of a loaf of bread. In any given state I would say that there is no such uniformity. In different cities there is a standard wholesale price, and somewhat uniform retail prices. My company does not endeavor to regulate the price at which the retailer sells bread. The great majority of retailers sell bread at the same price. The wholesale price of our bread is regulated pretty much by competition. In my opinion the standardization of bread weights is practical considering the fact that our coinage is such as it is and there is no unit smaller than the cent. Standardization of bread weights is absolutely fair to the public and baker as well, provided that there is what I consider proper tolerance. We find that where we have standardization of bread weights, and the cost of ingredients reaches the point where we think it is essential and necessary to advance our price, we do so. On the other hand, where we have standardization of bread weights and we find the cost of ingredients such that we can reduce the price, we likewise do that. In making those changes our company has not suffered a loss in so doing. We have sometimes made those changes, on a half cent basis. I consider that a practical solution of the problem. I am familiar with the ingredients which go into bread and the manner in which those ingredients are sold to the baking industry. They are sold either by weight or measure. [fol. 184] Flour, yeast, shortening, etc., are purchased by weight. I think there is a law regulating the moisture content of flour. In my opinion there is nothing to hinder baking industries from varying the price of bread just as the butcher and seller of other commodities vary the price of their goods.

"Q. If there is a spread of 2 ounces in the tolerance in any given law, isn't it as easy, Mr. Hines for the company to obey the law if the 2 ounces are above the standard weight, 16 ounces, as if it was one ounce below and one ounce above?

A. It would probably be as easy for them to obey the law, but in my opinion, I do not think it would be as fair. I am talking now of obeying the law from a legal point of view. We can make it in a practical way just as well as if it was an ounce below and an ounce above. On the other hand, I think the tolerance should work both ways."

Cross-examination:

I am not what you would term a practical baker and am not a practical chemist. I would say 90% of the bread baked by the Purity Baking Company is wrapped. Most of the bread left unwrapped is hearth bread, although in some plants they make some pan breads that are left unwrapped. The bread, however, that the general consuming public demands and gets is that which is wrapped. Bread manufactured by the Purity Baking Company is sold to the dealers. [fol. 185] We sell bread to our own retail stores, but the bulk of our business is with the retail grocer and the delicatessen store. It is my idea that the standard weight loaf is the fairest loaf to the consumer as he gets what he pays for. But the big point in the use of standard weights is the fact that the purchaser knows absolutely what he is buying. Where there is no standard weight law a consumer may think he is getting a pound loaf, but he is actually only getting 15 oz. That is remedied by the standard weight law.

"Q. Well, is that the idea that you have in mind?

A. Well, that and other ideas, but the big idea, in my opinion, the big point in the use of standard weights is the fact that the purchaser of the bread knows absolutely what he is buying."

I cannot give you the exact number of states having the standard weight law without enumerating them. Some states where we operate have laws permitting cities to regulate the weight by ordinances. We operate in more states having standard weight laws than in those which do not have such laws. There is a standard weight ordinance in Chicago. We do not bake bread here, although we do sell it. However, the company for which I worked before coming with the Purity Company, operated under the Chicago ordinance. States having standard weights usually have loaves of a pound, a pound and one-half, or multiples of a pound. In some states where we operate we sell more pound and one-half than one pound loaves. In states where [fol. 186] they have no standard weight laws, it is necessary to make a larger variety of sizes in order to meet competition.

"Q. And from that point of view the standard weight bread law is a good thing for the manufacturers of bread?

A. I would say not.

Q. Doesn't it require them to make fewer weights of bread?

A. I would say that the standard weight, where standard weight law is in effect, tends to a fewer weights or brands or varieties."

Where there is no standard weight law, the baker may bake any size loaf he wishes. We have different weight loaves in different cities. We have no six ounce loaves and no ten ounce loaves. In Chicago we put out one pound and twenty-four ounce loaves; also a few two and three pound loaves. In states which have standard weight laws, we put out one pound, one and one-half, two and three pound loaves. In places where they have no standard weight law, like Kansas City, Missouri, for example, we put out bread in which the scaling weight is 15½ ounces. The baked weight of that loaf is 13 or 13½ oz-. We also bake loaves there which scale at 22 oz-. They weigh about 19 or 19½ oz-. when baked. We bake another loaf scaling 24½ oz-. which weighs about 22 or 22½ oz-. baked. We sell these loaves in both Kansas and Missouri. In a state having standard weights, we require fewer pans for our business. "I would say it was caused by the fact that there is no standard weight law as to regulate the weight that bakers can put out finished loaves at, and that a great many times a competitor [fol. 187] thinks, so to speak, he can sneak something over on another competitor and he makes a loaf of an odd size and possibly an odd price." The most popular loaf is the one pound. That applies to practically all of the United States, although in some cities it is not true. I have never lived in Nebraska, although I have been there a great deal and would say that I am somewhat familiar with climatic conditions in that State. From the time the dough is mixed, and before it is put into the oven, there is some evaporation of moisture. That would depend to a very slight degree on the amount of moisture in the ingredients used.

"Q. Well, there is a variation in the moisture in ingredients, isn't there?

A. Some, yes.

Q. Some flours are very much more moist than other flours, aren't they?

A. I should hardly think so. As I stated before, I am of the opinion that there is some kind of a standard or law regulating the moisture content of flour."

In our plants there is very little difference in the moisture content in the flour we use. We use one grade, but various brands of flour. These are called "patent" flours. We use a high grade flour and presume that they do contain the highest quality of gluten. There is evaporation of moisture from bread while it is baking in the oven, although that evaporation is not great. After bread is baked it is subject to a certain amount of evaporation, unless it is properly handled. In a perfectly dry place the loaf of bread will dry [fol. 188] out faster than it would under other conditions, and it will absorb moisture to some extent. Bread is somewhat porous.

"A. I am not very familiar with other foodstuffs other than bread in that respect. However, if shipping conditions and conditions of bread that dries out are properly watched and controlled at various seasons of the year, and wrapped at what we might term a proper time, I do not think it would make much difference."

We cannot, of course, control the conditions under which bread is kept after it is delivered to the retailer.

"A. Excepting as to what argument or talk or persuasion, you might say, that the salesman puts up to the dealer to get him to keep it in the proper place."

We do know the condition under which bread is kept after it is in the hands of dealers, for we have checkups made to see in what condition the dealer keeps his bread and where he keeps it. Our men are sometimes present when bread is sold by the retailer and may take out a loaf to examine its condition. I do not think a dealer would object to constructive suggestions from our salesman.

"Q. Now, Mr. Hines, I will put it in a nut shell. Can you tell us—you are testifying now—can you tell us that you know the degree of moisture that is in your bread in the various retail dealers' stores when the consumer gets that bread?

A. No, I could not tell you.

Q. No, you could not possibly, could you?

A. Just exactly how much it weighs, no."

The price of bread is regulated mostly by competition. [fol. 189] I would say that a standard bread weight law is

good for the baker and the consuming public, as well. In my opinion, the public is entitled to know what they are buying, and how much a loaf weighs. This they get under the standard weight law. In the absence of such a law they get what the baker chooses to make.

"A. In my opinion the public is entitled to know what they are buying, what the weight of it is. They get that under standard weight law."

Where there is no standard weight law they may get any weight loaf; when I say any weight loaf, I do not mean they get any weight loaf he chooses to make.

Q. Isn't that the reason why you are in favor of a standard weight bread law, so far as the consumer is concerned?

A. That is the big reason, yes. We believe that the consuming public is entitled to know what they are buying and paying for."

So far as the bakers are concerned, the law eliminated unfair competition to a certain extent. I would say that fewer different weight loaves are made under the law, and there is not the constant changing of the sizes of the loaves. We always bake loaves to conform with the law. In Chicago, we can bake no loaves other than one pound, pound and a half, and multiples of a pound. Where there is a standard weight law, there are fewer weights in loaves because they must all conform to the weights provided in [fol. 190] the law. Where you have standard weights, the public knows exactly what they are buying, "whether a pound loaf or a pound and a half loaf. When it is a pound loaf they get their sixteen ounces; if it is a pound and a half loaf they get twenty-four ounces; in a three pound loaf they would get their forty-eight ounces of bread. As I said before, such a law benefits the public, and likewise the baker is benefited even more. It is my opinion that in states and cities where there is no standard weight law, 85% of the housewives who purchase a loaf of bread believe they are getting a pound, or pound and one-half loaf, whereas, they do not get it.

Redirect examination:

"Q. Mr. Hines, in your opinion, have purchasers in the past or are they likely in the future to be induced to take

a nine and a [illegible]f or ten ounce loaf for a pound loaf, or eighteen and [illegible] half or nineteen ounces for a pound and a half loaf?

A. Not to any very great extent with that variation in weights, that difference in them. I think those differences are rather far fetched."

In my opinion, consumers in the past have been induced to purchase loaves of bread weighing 20 and 22 oz. for a 24 oz. loaf, and they are likely to do so in the future. They [fol. 191] have also been induced to take 12 ounce loaves, believing that they were getting 16 ounce loaves. In my opinion, a maximum tolerance is necessary in order to have a standard weight law. I have found in my experience that some bakers put out an 18 or 19 ounce baked loaf and label it a pound and a half and then contended it was a mistake on the part of some one in the shop in placing the label on the loaf, but the loaf itself was an overweight pound loaf and not an underweight pound and a half loaf. This leads to difficulty with the authorities "and it leaves somewhat of an opening there for some one who did not want to be right, to a way out, so to speak." In my opinion it is necessary to have a maximum tolerance for the protection of purchasers against imposition from short weights. The maximum tolerance tends to prevent this. In states having no standard weight law, the acts of our competitors determine the sizes, shapes and weights of our loaves. In my experience, I find that we must often conform to fads and changes made by our competitors.

I am to some extent acquainted with the climatic conditions in Texas, Kansas, and Iowa. I don't know whether climatic conditions in Nebraska are so widely different from those here in Chicago that it would require a greater tolerance than we have in Illinois. There is a practicable, inexpensive means at hand for the baker to assist him in coping with the matter of loss of weight by evaporation [fol. 192] due to climatic condition.

"A. Well, if he is familiar and keeps in touch, so to speak, with climatic conditions, he, under some conditions, will let his bread stand probably a little longer before it

is wrapped than he would under other conditions and at other periods or times he would probably wrap it a little quicker than he would, or sooner; not let it stand as long. In our plants we try to regulate that. It is our opinion, that in the fall, so to speak, when the air is cool and dry, that bread should not stand as long before wrapping as it would in the summer months, for example. In the summer he would let it stand longer, for a greater period of time."

The act or practice of wrapping bread does very materially prevent loss of weight by evaporation, and I consider it a practical and inexpensive means to that end. There is a decided demand for wrapped bread. There are certain features to be had from wrapping bread which offset the expense of wrapping it.

There is an identity of interest between the wholesale dealer and the retail dealer, with respect to keeping bread in a place where it will remain fresh and salable. Our salesmen make suggestions to the retailer as to where and how he should keep his bread. "To be as sure as we possibly can that our product reaches the customer in the best possible condition." I think retailers generally do conform to the suggestions and are willing to cooperate. [fol. 193] I do not know the exact amount of moisture in our bread when turned over to the consumer. Occasionally we get complaints. In most cases our men call on the retailer twice daily, and try to leave enough bread with the retailer to take care of his sales until the next trip. If he finds a loaf or two over at the next trip, he asks the retailer to sell them first.

In my opinion a so-called standard weight law, which merely provides for the marking of the weight on the wrapper, is not actually a standard weight loaf law at all, and does not protect the buying public from fraud. "I base that opinion on the fact that in cities or states where we operate where there is no standard weight laws, that the great majority of the housewives believe that they are getting bread of a pound or pound and a half in weight, notwithstanding the fact that the loaves are marked in accordance with the law." In my opinion, the housewife, or ordinary bread purchaser, does not examine the wrapper to see the weight of the loaf of bread. They ordinarily determine the size of a loaf of bread merely by a large or

a small loaf. For that reason, I don't know as you would just term it exactly fraud, but it leaves the door open, I think, when they do not have standard weights, for the baker and the wholesaler or retailer or chain store bakery to advertise, which they have and which they do, a large loaf at a supposed low price; in my opinion, the people [fol. 194] who purchase that large loaf, the great majority of them, think they are getting a pound and a half loaf. In states where there is no standard weight law in effect there are variations in the weight of the loaves, and in the retail price asked for those loaves. In states where they have a standard weight law these elements are entirely removed. In my opinion, there is greater opportunity for comparison and it is easier for a prospective purchaser to compare two loaves in order to determine which is the better purchase, where there is simply a variation in the quality of bread and a variation in the price.

"Q. Where there are three variants and where two loaves vary in size, in price and in quality, in your opinion, is the ordinary purchaser able to make a comparison as to which is the better bargain?

A. They are able to make a comparison, but I do not believe it is ever done, at least to any extent."

Recross-examination:

"Q. Mr. Hines, if the law requires the weight of a given loaf to be stamped upon that loaf, how is the purchaser gypped in any way?

A. I might say they are gypped because of the fact that it seems to be a custom, to say the very least, with the purchaser of bread, that they believe they are getting a pound or a pound and a half loaf, and in the purchasing of bread I do not know why they would look at the weight any more than they would at a package of breakfast food or anything else.

[fol. 195] Q. That is the only reason you can give for your statement?

A. No; sometimes I have known in the past bakers that when it came up to Friday and there was a big bake for Saturday, that would slip their weight labels on just probably for the day and cut their weight a little. "The law does not forbid that because the law permits him to make it any weight they want, providing they put the weight

on the label, but if I am a purchaser of bread today and I scrutinize the purchase of my bread enough to know that a loaf has been marked for three or four days, for example, fifteen ounces, I might come in next Saturday and not look at it and I might be getting a fourteen ounce loaf and the label might say fourteen ounces."

Q. I think you and I do not understand each other, Mr. Hines. My question is that in a state having a bread weight law, if it requires the weight of any given loaf to be stamped upon that loaf, isn't the purchaser protected?

A. With the standard weight law?

Q. Yes.

A. Yes."

The only law that protects the consumer is the one that fixes a standard weight upon which the purchaser can always rely. Where there is a standard weight law the purchaser is protected to a much greater degree than where simply the weight must be put on the wrapper, like the so-called Massachusetts law. "It is my opinion and has been for years and years, that the great majority of purchasers of bread, whether it be through custom or [fol. 196] habit or whatnot, believe that when they buy a loaf of bread that they are getting a pound loaf, if it is a small loaf, or a pound and a half if it is a large one, and that a law that provides and compels, so to speak, the bakers to make loaves in these sizes and gives proper tolerance, is a much greater protection to the purchasing public than the so-called, I might say, Massachusetts law which allows for the marking of the weight of the loaf." The Chicago Ordinance requires standard weights and also that the weight be marked on the wrapper. This is not true in some of the State laws.

"A. I think in Massachusetts or New York if you make a loaf of bread that weighs a pound or pound and a half, that it is not necessary to put the label on the loaf, label for the weight. If he wants to put out a loaf weighing only 15 ounces he must label the loaf. If he puts out a loaf weighing 15 ounces and does not label it, I believe he is subject to a penalty.

"Q. Well, it is those penalties that hold both bakers and dealers in line, isn't it?

A. Well, I presume so, yes." "But, on the other hand, as I said before, he can live up to the law and comply with the law and alter his weights every day, providing the baked loaf has the weight of the baked loaf on the label, and that when he can do that he has an opportunity, if he is so inclined, to fool the purchaser." If under any of these bread laws a baker puts out a pound loaf and marks it sixteen ounces and the inspector comes in and weighs [fol. 197] it and finds it only weighs fourteen ounces, the baker has violated the law. I do not think he could do it regularly.

"Q. If the purchaser gets the weight of bread which is on the label, then he is not deceived, is he?

A. No.

Q. He is not defrauded in any way?

A. No.

Q. If the purchaser——

A. Pardon me. I don't know as I will say he would not be defrauded, because he has gone along, as I said before, for a certain number of days, for example, or weeks, and purchased a loaf of bread weighing a certain amount. Then he might not look at it every day, and if a baker alters his weights and he does not look at it, he buys that weight feeling it is the same weight as the previous loaf when he looked at the label.

Q. If the correct weight is stamped on the loaf how is he deceived?

A. I would say he is being fooled, if not deceived. I think it leaves the door open for that opportunity and that chance." In that case, neither the baker nor the dealer is violating the law. "But, I don't think the law should be such that they could do that, and furthermore, I think the laws on the weights of bread should be standardized so that when they walk into a store and purchase a loaf of [fol. 198] bread day in and day out they know it to weigh a certain weight, and that it had not been changed from the day before or from the week before."

Redirect examination:

If the Massachusetts law principle were applied to all commodities, it would be necessary for a purchaser to read the label whenever he purchased a loaf of bread, a can of peas, or any other article. It has been my experi-

ence that, if a purchaser has been in the habit of buying a certain product for a certain length of time, he gets accustomed to assuming that the product is standard and uniform. If it is then changed without warning, he is apt to continue buying it without discovering the change.

[fol. 199] O. P. Skaggs, a witness in behalf of the defendants, testified as follows:

Direct examination:

My name is O. P. Skaggs. I live at 105 South 57th Street, Omaha, Nebraska. I am engaged in the bakery and retail grocery business. I have operated bakeries from time to time during the past sixteen years, but not continuously. I am connected with the O. P. Skaggs Companies. These are various corporations in Nebraska, and we operate under the name of O. P. Skaggs Nebraska Stores Company. We have the O. P. Skaggs Wyoming Stores Company, F. A. Buchanan & Company, Colorado, O. P. Skaggs Idaho Stores Company, O. P. Skaggs Utah Stores Companies, and the O. P. Skaggs Company, which is a holding company. The holding company is incorporated in Delaware. I am president of each of these companies. Our corporation is a closed corporation. The Omaha plant is located at 19th and California Streets. Our bakeries are owned and operated by myself personally. They are called O. P. Skaggs Baking Company. I am the sole owner. The same applies to the baking operations in other States. I have a large modern plant at 19th & California Streets, Omaha. I bake nothing but bread. This bread is of three varieties: white, whole wheat and raisin. My output runs from sixty to eighty thousand loaves a week. It is gradually increasing. The output in the Salt Lake plant is greater than the output of the [fol. 200] Omaha plant. In baking our bread we use flour, salt, yeast, sugar and lard. The flour is of high quality and the ingredients the best we can get for high quality bread. We use the highest protein flour on the market. This is also rich in gluten. I think it is the best bread in Nebraska. We wrap all of our bread. We bake at nights. We bake Friday night for local distribution for Saturday's sales and in order to eliminate baking on Sunday,

we bake through Saturday morning. Ordinarily, we bake Sunday for outlying towns, to be used in Monday's sales. That bread is shipped Sunday afternoon. We ship this bread to some counties in Missouri, Iowa, South Dakota and Nebraska. We ship all over the State of Nebraska, and in eastern Wyoming. We ship also to Cheyenne and Torrington, Wyoming, from the Omaha plant. Formerly we shipped to Greeley, Colorado, and Abilene, Kansas. We now buy bread from local bakers at those points. We have standing orders for bread, and we bake to order, so we know in advance how much bread will be required in any given town or any given day of the week. We turn in our baking orders at five o'clock each afternoon for that night's bake and next day's shipments. We work out the problem carefully so that we can get the freshest possible bread to the customer at all times. The labels on our bread read, "Net Weight Sixteen Ounces when baked." These weights are checked constantly by food inspectors particularly in Wyoming and Western Nebraska. I per-
[fol. 201] sonally inspect this bread at these destinations from time to time.

"Q. When you see it there and test it do you find it is up to the standards you fix?

A. I never found it any other way. Of course, our men work very close on their requirements. It is shipped daily, but frequently because of bad weather or some other unanticipated occurrence, they have bread left over and it accumulates."

In Wyoming and Iowa, we are required to meet certain standard weight requirements. The inspectors in Wyoming are very particular. They weigh the bread.

"A. We have never had any trouble with any bread that went from this plant. It has never been brought to our attention, any short weights. We watch it very closely, of course."

We ship our bread in six-bushel wooden shipping baskets holding eighty-five loaves each, by express and truck. These baskets are made of slats and held together by wire. This is a common way of shipping bread. Some bakers, however, use sealed paper cartons. I do not like these cartons because there is no circulation of air in them, and

the bread sweats. I am familiar with the manner in which other bakers supply retailers in the territory in which we operate. Most of them use these paper cartons for customers who use a considerable number of loaves a day.

"Q. Do you know any bakers in Omaha or Lincoln who ship their bread unwrapped?

A. I have never seen it. I have not seen a loaf of un-[fol. 202] wrapped bread shipped for ten years, any place.

Q. So you would say it is the universal practice at the present time to ship wrapped bread?

A. I don't think the people would buy it unwrapped, and I don't think the grocers would want it unwrapped."

We scale our dough for the 16 ounce loaf at 18 ounces, a light 18 ounces. We are careful that it never goes over because it just requires a little less than 18 ounces. The baked weight is sightly above 16 ounces. We seldom sell bread which is two days old, without putting signs on it to indicate "yesterday's bread" or "stale bread," and sell it at a reduced price. Bread which is baked Saturday morning is seldom sold later than Monday.

"Q. What does it weigh when it gets to be about three days old?

A. Well, I have not weighed any at the end of the week or at the end of three or four days in my office. We are watching our weights closely and up to the limit of time we would expect it to be sold."

The oldest bread that we sell is sold in Cheyenne because of the great distance from Omaha. We have never had a complaint there from the State Food inspector who lives in Cheyenne. He is in our store frequently and is a very aggressive man on weights. He is on the job all the time up there We sell bread in eastern and southern Idaho, which is shipped out of the Salt Lake plant. We also sell in [fol. 203] Nevada and Utah. In those states, the atmosphere is probably not hotter, but it is much dryer. Nevada and Utah are the worst states for bread drying out. Even in these states, we have no difficulty in keeping bread fresh for a reasonable length of time. I am familiar with the provisions of the Nebraska Standard Weight Loaf law.

"Q. What is your opinion as to the possibility of baking bread in Omaha or Lincoln, the eastern part of the

State and shipping it to the western part, where it weighs less than 19½ oz. when baked, and when it will still weigh 16 oz. at the end of 12 hours after receipt by the retailer?

A. There is no condition like that that would exist.

Q. I am asking you as to your opinion as to whether that is possible, to comply with that law?

A. Possible to comply with it?

Q. Yes. In other words, Mr. Skaggs, do you believe that a 3½ oz. tolerance under all conditions in Nebraska is sufficient under this law?

A. We don't need more than ½ oz. tolerance on our part.

Q. And that refers to bread shipped out into the western part of the State?

A. Yes.

Q. Are you considering the worst months of the year?

A. Yes.

Q. Like July and August?

A. I am considering the entire year. I would like to add that at this time we are baking a 12 oz. loaf of bread and furnishing it to independent grocers throughout the State of Nebraska, where they desire to use it and sell it for 5¢ in competition with local small weight loaves of bread, but [fol. 204] no bread sold in our own stores or with our name on it is put out with less weight than 16 ounces. This 12 ounce bread does not have our name on it."

I think a tolerance of one-half ounce would be a very liberal one and that any one could comply with it that wanted to. I am referring now to wrapped bread; I know nothing about unwrapped bread. In fact, there is no unwrapped bread today except that sold in the front end of a bake shop, where they bake in the rear and sell it in the case, and a little Vienna bread, some rye bread and pumpernickle bread is not all wrapped, but almost all bakers have been forced to wrap their bread by inserting it in waxed paper bags. People will not buy unwrapped bread. They would not buy it even if it was offered. None of the reputable stores sell unwrapped bread today, none that I know of. "We don't sell any unwrapped bread. We don't bake rye or Vienna, we buy that from other bakers." I know what the public demands and I would say there is no demand on the baker for unwrapped bread, other than what I have mentioned.

Assuming that a loaf of bread were shipped out of Omaha into some western town and kept under such con- [fol. 205] ditions that it actually shrank three and one-half ounces to the pound loaf, I would not consider that bread still edible. I know of no conditions under which it could shrink in that manner. If placed on a hot radiator, or out in the hot sun or on hot sand, I doubt if it would shrink that much unless it were baked with an excessive amount of moisture. Of course, the quality of bread would be lower if that much moisture were used.

"Q. If a loaf were unwrapped and exposed in a very dry and hot place for a considerable period of time, is it not likely it would dry out as much as 3½ oz.

A. I am not able to answer that. I cannot imagine, however, that a loaf of bread would contain 3½ oz. of moisture any time after it is baked.

Q. That could evaporate?

A. That could evaporate under any conditions."

If three and one-half ounces of moisture actually evaporated from a loaf of bread, I would not consider the bread edible, and I do not think anyone would buy it.

We sell our bread at wholesale as follows: Twelve ounce loaf for four cents, sixteen ounce for five cents.

"Q. Is there in Omaha a standard retail price for bread?

A. Well, there was before our bakery opened. I rather think that there is not a standard price today, excepting on the bread baked by the larger bakers here, and one of the reasons for us building this plant was that we were not permitted to sell that bread under 9¢ a loaf retail, and we [fol. 206] had to pay 8¢ a loaf for it.

Q. When you speak of the larger bakers, you are referring to the Petersen Baking Company and other plaintiffs in this case?

A. I don't know who the other plaintiffs are. I am referring to the Rex Baking Co., the Butternut, Petersen Baking Co., Standard Bakery and Jay Burns Bakery."

In the City of Omaha, we retail our pound loaf for five cents. It retails in Lincoln for five cents. In some of the outlying towns, however, it retails for seven cents. There are now several small bakeries in Omaha producing a loaf that sells for five cents. The Piggly Wiggly bakes such a

loaf. Most of these are twelve ounce loaves. They are short weight, that is, they are not a pound. It is because we were not permitted to sell the pound loaf for less than nine cents that we stopped buying bread from Petersen Baking Company, Standard Baking Company, Rex Baking Company and others. If we attempted to do that, they would take the bread away from us. We thereupon built our own bakery. There is nothing peculiar about the figgures, ten cents and fifteen cents. Any other figure might be used as the price for a loaf of bread.

"A. Yes, a different price can be placed on a loaf of bread. The average consumer thinks of a small loaf of bread, which is referred to as the 10¢ size, as being a pound loaf, and a large loaf as being a pound and a half or one and one-half times the size of the small loaf."

Q. Now, Mr. Skaggs, if the prices of ingredients going [fol. 207] into a loaf of bread change, of course, the overhead expense of producing that loaf would vary a little, would it not?

A. Only in the cost of materials, not in the overhead, but the material cost would advance naturally.

Q. Suppose that a barrel of flour would change in cost to the extent of $1.00 a barrel, would that be reflected greatly in the cost of producing a loaf of bread?

A. Not any big amount. I could not answer that accurately without having our figures. I don't recall exactly how many loaves of bread we get from a barrel of flour, but we have had that change in our own baking without raising our prices.

Q. And has it interfered particularly?

A. It has interfered with our profits, yes." Last year our Salt Lake plant for the entire year showed an overhead and material cost of a fraction more than five cents a loaf for a sixteen ounce loaf. We made a net profit of almost one cent a loaf. That would be almost twenty percent net profit. I believe our net profit in the Omaha plant thus far is thirteen percent.

It is my opinion that if the Nebraska Standard Bread Weight Law went into effect, Omaha and Lincoln bakers would not suffer financial loss. In fact, it is my opinion that they would make more money with the law than without it.

"A. In the first place the large bakers would all make a better quality of bread. There would be no reason for causing a light weight loaf to look large and thereby spoil- [fol. 208] ing its quality, and it would force the small bakers to do the same thing, and it would increase the consumption of bakers bread very greatly."

Statistics show that for a number of years, the consumption of baker's bread has declined. No one but the bakers are responsible for this because of their practice of puffing bread and thereby decreasing the gluten food value. This is done in order to have a big looking loaf, weighing as little as possible. We have staked everything on a full weight loaf of bread of the best quality regardless of size. We could make our bread look a good deal larger and still have a tester and scale that would be superior to anything baked in Omaha. If the dough is not handled at the proper time, and fermentated at the proper time, yeast germs devour the gluten in the flour. This causes the dough to become very light, fluffy and puffed up. This produces bread which customers refer to as fodder. This has no food value. If there were a Standard Weight Loaf Law in effect, there would be no object in puffing bread. Bakers would be interested in furnishing quality rather than size. Bakers sell bread which is supposed to weigh one and one-half pounds, but in the absence of a Standard Weight Law most of the bread actually weighs only nineteen, twenty and twenty-two ounces. I am particularly referring to the practice of Lincoln bakers when we bought from them some time ago. There is no foundation to the contention that [fol. 209] bakers would lose money by operating under a Standard Weight Law. There is nothing to prevent the baker from charging what he sees fit for the bread. If a baker is now baking a fourteen ounce loaf and selling it for eight cents and he is compelled to make it weigh sixteen ounces, and he still sells it for eight cents, of course, he will lose the difference. It has been my experience that most bakers charge as much for their short weight loaves as they should charge for the full weight loaves, and under the present policy the baker is just receiving excessive profit and the public is paying this unknowingly. During recent years we have bought bread from various large bakers; they did not vary the prices with the changes in the cost of

flour and other ingredients. There has been no change in the wholesale cost of bread. The price of wheat at times of the year has varied considerably during the past few years, but for the baker's supply, if he buys at the right time, it has not varied greatly during the last 5 or 6 years that I recall. It is not practical for the ordinary purchaser of bread to compare two loaves when there are three elements to be considered, weight of the loaf, the price and the quality. The way the weights of most bread is marked in states without laws, there is not much way [fol. 210] for them to compare weights by looking at the bread at all nowadays, in states that have no bread laws. "Of course, they can compare as to quality after they get it home, and the price right on the spot, but they cannot tell without a lot of trouble in many cases which loaf is the proper loaf to buy as to weight. You can look over a lot of bread for 5 minutes and cannot find the weights on it. I have done that in the past." We print the weight of the loaf across the top on long strips and in two different places.

"Q. If a 12 ounce loaf is puffed as you described it sometimes is, how does it compare in size with the 16 ounce loaf that is baked in the ordinary manner?

A. Well, our 12 ounce loaf is the same size as the 16 ounce, we pack 85 loaves in a basket and it fills the basket the same as the other, putting them side by side, in fact, they are made of the same material and are the same bake, but one stands a sufficient length of time to puff it up. There would be no method of comparing those weights by looking at them. You could not tell one from the other side by side, unless you read the label. The label on our 12 ounce bread is very plain; we are not trying to deceive on it; it is a plain label showing plainly across the top of the loaf. If a purchaser attempted to compare the 12 ounce loaf with the 16 ounce loaf, where the 12 ounce loaf [fol. 211] sold for less money than the 16 ounce loaf, and was made of different ingredients and by a different formula, it would be rather an intricate problem to figure out or to compare the relative values; it would be almost impossible unless they could determine readily what each package contained and then do a lot of figuring. A lot of grocers could not figure that out, and, of course, there are a lot of people — could not do it. If the price of bread were changed with changed conditions and changed costs

of production, I don't think that would interfere with the sale of the bread and consequently with the baking industry; it would have to change as everything else; butter, sugar, flour, everything changes from week to week, and day to day sometimes. The reason why bread prices have not changed during the recent years, when lard doubles in price and sugar goes up three cents a pound, is because there has always been a very large margin of profit for the bakers on the wholesale prices which they charged. In large cities, most of the large bakers work together and control the price. I buy my ingredients on the open market. I do not believe that I can buy those ingredients cheaper than other large bakers of Omaha. We use all modern machinery. I think that perhaps our cost of baking, wrapping and producing bread ready for the market is less than other bakers. This is largely due to the fact that we confine ourselves to three varieties and two sizes. [fol. 212] We can in this way produce bread with less overhead than we could if we bake eighteen or twenty styles and sizes as most bakers do. "No other bakers serving the general grocery trade can grade as we do unless they reduced their prices and went into it to solicit and secure standing daily bread orders and bake to order." There is no reason why they could not do the same thing, "but they would probably have a great deal of trouble getting grocers to ascertain how much bread they would use from day to day; that is the big extravagance in getting bread to the public, baking blindly and then confronting adverse weather conditions and having bread left over, and the large bakers of today are highly competitive in service, not in price. You meet their trucks out of here 40 miles, any place most, to leave one dozen or so loaves of bread. That costs a lot of money. They are practically all doing the same thing. That service is not necessary, exeepting one does it because the other does it, and inasmuch as they have no price changes and not very often quality changes between one and the other, it runs into more trucks to get the business." Most of these bakers are more interested in having their truck beat the truck of their competitor to a grocery store than they are in furnishing him fresh bread. Weather changes do not affect the condition of our bread that is already baked to any [fol. 213] noticeable extent to ourselves or our customers.

There is no effort made to control those elements, excepting for wrapping the bread and putting them in boxes. "We don't take it into consideration at all."

During the last few years, most grocers exposed their bread for sale on counters and in open shelves. This is, of course, all wrapped bread. "I have not seen unwrapped bread in a grocery store for years that I know of. Many years ago all grocers kept a bread case, but that was before the wrapping days. Some grocers may yet keep it in glass cases, but I am not familiar with that."

O. P. Skaggs—Cross-examination:

I am not a journeyman baker, but I have made quite a study of bread baking. I have worked closely with every bakery superintendent whom I have employed.

"Q. What you know then is what you got from him?

A. What I got from various superintendents. I am not a practical baker."

"Q. Then the information which you have must have come from others, is that right?

A. This information I have, I believe, and everything I have said is as to my own knowledge."

I never scaled any dough, but our scales are set for eighteen ounces, and I have stood by and watched hundreds of times when the men at the divider pick up loaves and weigh them. I have never seen the man add to or subtract from a loaf, but I have seen him throw back some [fol. 214] pieces of dough right after adjusting the machine. The scaling process is done by machine. The man at the machine is expected to weigh every third or fourth loaf that comes over the belt. Our dividing machine is not absolutely accurate, but it is guaranteed to be accurate to a fraction of an ounce. The machine carefully superintended by an operator, is less expensive and more accurate than dividing by hand. We have records showing the amount of moisture lost during the fermentation process. During the baking process a little less than two ounces is lost from a pound loaf. Our ovens are kept at 450 degrees and the loaves are left in the oven from thirty-five to forty minutes. The temperature is kept even by careful firing. We put the dough in front of the oven; then the first loaves put in are shoved to the back. Those

in first stay in the longest, possibly in some cases, but they move those pans when the bread is about half baked; whether they move every one I am not sure.

We have seven stores in Omaha. We furnish those stores all the bread of the type we bake. Other kinds of bread we buy from other bakers. We do not sell to other retail stores. We transport the bread sold outside of Omaha both by truck and rail. Our bread goes to Lincoln, Blair, Tekamah and Fremont by truck. Occasionally [fol. 215] it goes to Grand Island and Hastings by truck. Last week, our output was eighty thousand loaves. We started last July, and our output has constantly increased. Since the 1st of July, our output would average sixty thousand loaves a week, "but that is only an estimate". We have stores at Grand Island, Hastings, Lincoln, and other Nebraska cities. I would estimate that from thirty-five to forty thousand loaves are distributed among Skaggs stores and the balance sold to other dealers.

We buy hard wheat flour for our bread. It is milled in Omaha but it is ground largely from Kansas wheat.

Q. Is that called patent flour?

A. I could not tell you that. I do not know what the average percentage of moisture in the flour we buy is. I don't know the percentage of moisture in the ingredients put in our bread. I can't tell you offhand the temperature in our baking plant where the dough is prepared, the fermentation room and all the rooms. I know the condition of the humidity in the air in the plant in the various rooms from day to day, and the atmosphere from day to day. We have recording instruments that record that.

Q. Do you pay any attention in your baking process to the temperatures and humidity in the various rooms?

[fol. 216] A. We pay very strict attention to all those matters. We have the best equipment for registering those temperatures. We meet variations in temperature and humidity in our plant by adjusting this apparatus; if the fermentation room is not warm enough or cool enough, we either use more heat or more refrigeration, simply trying to keep our rooms at a certain temperature and certain humidity. We are able to do that quite accurately.

We do not use the highest protein flour.

"Q. What do you mean by the highest protein flour?

A. For the last few years the price of flour with extremely high percentage of protein has been abnormally high, and it is not necessary, most bakers think, to use a flour of an extremely high percentage of protein. We have to have flour that has a reasonable amount of it, that is what the strength of the flour is gauged by, as I understand it.

Q. Is the best flour that which is highest in protein?

A. No sir.

Q. What do you say in regard to the moisture content of flours, which is the best flour, that with the most moisture content or with the least moisture content?

A. I could not answer that question."

Flour with the most gluten is the best flour.

We sell bread to dealers other than Skaggs Stores, outside of Omaha, but not in Omaha. We sell to only one man in town.

[fol. 217] I am not able to tell you how much moisture there is in baked bread, or how much in a piece of dough before it is baked. My superintendent can give you that information. Our object in wrapping bread is to keep it clean, to keep it soft and to furnish the kind of bread which the public demands—namely, wrapped bread. We use waxed paper for wrapping. Some air enters the wrapper. It is our experience that if bread contains a proper amount of moisture, but not an excessive amount, it loses very little weight after baking. I have not made experiments along that line to determine how much moisture a loaf of bread will lose under certain conditions after being baked; I have never placed it around in any places other than those similar to what it would be in when in transit and in our stores." Bread is very porous, and some much more than others. Bread would not remain as moist and edible without being wrapped in paper as it is. I would think, unwrapped bread would lose moisture more than wrapped bread.

Q. In other words, Mr. Skaggs, is there any other reason for wrapping bread than just to keep it clean?

A. Of course, we have never considered selling an unwrapped loaf of bread, that has been out of our thoughts and plans.

[fol. 218] It is our custom to keep in daily touch with the Skaggs stores.

"Q. And you aim to give those stores only what they sell each day?

A. The manager of the store gives us his order. He watches, or he is supposed to watch it, and he is supposed to have enough bread left over each night to last him a couple or three hours the next morning, so that in case of a slight delay in receiving his bread he has bread for early selling. We consider our bread good for two or three days.

Q. But practically your bread is sold within 24 hours.

A. We want him to clean up just as near on schedule as possible."

We have used both cartons and baskets for shipping our bread. In the Salt Lake plant, we used the carton for a while, but found that the bread became soft and soggy and would mould in half the time that it would when shipped in the slat baskets. We bake the 12 ounce loaf for what we call an independent grocer or individual.

"Q. When you use the word 'individual' does that mean cut rate store?

A. Not necessarily, but it means a grocer who has no interest beyond one store. He is an individual grocer, has an individual grocery and not a chain store.

Q. As I understand, you have a 12 ounce loaf as big in size as the 16 ounce?

[fol. 219] A. It is the same size. It takes 85 loaves to fill a basket. That 12 ounce loaf is not sold as a pound loaf; it is not sold as anything but what it is. If a 12 ounce loaf were sold by a dealer as a pound loaf, he would be subject to the general criminal laws. The weights are printed on these wrappers in good plain type. The large loaf, that is the one and one-half pound loaf, generally retails at fifteen cents, and the pound loaf at ten cents. The Skaggs stores are selling the one pound loaf for five cents. We don't bake the one and one-half pound loaf, we have only one pound loaves, excepting these 12 ounce loaves which we make to order but do not sell in our stores.

"Q. Have you, since you started in business, run out any of the larger bakers?

A. I have not.

Q. Have the larger bakers reduced their plant in any way since you started in business?

A. Not that I know of. We know very little about each other. I came very near opening stores in this town without bread to sell. I did not know that the larger bakers' bread is being sold in Omaha at the prices of ten cents and fifteen cents, I don't think that is a fact. I think it is sold for 9 cents and 14 cents, and I believe they are charging whole-[fol. 220] sale prices at eight cents and twelve cents; I am not sure. I sell that same size loaf of bread for five cents and a better quality.

"Q. That is your claim, that it is a better quality of loaf?

A. It really is."

We are not swamped with orders from retail dealers because we are not selling our bread to them. We are in the retail grocery business and do not wish to put our competitors on a level with us. We have sold as high as thirty-five thousand loaves in Omaha in a single day.

"Q. But you say that none of the larger bakers have quit business since you started?

A. No, they have not, to my knowledge.

Q. But you still claim that you are selling a loaf of bread for five cents which is the same size and better quality than the loaf they are selling for nine cents?

A. Yes. It is possible, you know, that these many thousand loaves of bread we are selling is newly created business, that is possible. I mean by that "that there is more bread consumed in Omaha than formerly, because I do not know of a single person that formerly bought Petersen's bread that is now buying ours. I don't happen to have that knowledge. If all the bakers made bread like ours, the housewife would not bake at all."

[fol. 221] It is my opinion that either an excessive amount of moisture or want of moisture would produce an inferior loaf. It was my statement that the 19 oz. loaf which bakers were selling before we started baking was retailed as a large loaf. By that I mean the public thought it was the larger of the two popular loaves. Bakers and retailers do not advertise bread by weight. They advertise small and

large loaves. The consumer naturally thinks that they are referring to pound and pound and a half loaves. If a consumer came to our store and asked for a pound loaf, we would not sell him anything that weighed less than a pound, but it is done constantly in the business. It is true that it constitutes a violation of the criminal law and the retailer could be punished, but the consuming public is very slow in taking action for the reason that there is so little involved. We do not claim that we sell everything for less than do the other retailers, but we do claim that if the consumer buys his groceries from us, he will save money. Generally speaking, we do sell articles for less than do other grocers and other chain stores. I do not say that our ingredients are more expensive than those used by other good bakers, but I do say they are more expensive and of higher quality than those used by many bakers. I believe the reason why many bakers charge more is because their overhead is greater.

[fol. 222] O. P. Skaggs—Redirect examination:

About four hundred of the small loaves are placed in the oven at one time.

"Q. Can you detect a material difference in the extent to which these loaves are baked, as to where they happen to be placed in the oven?

A. There is no differential there that amounts to so much. Our man pushes a few pans near the door, but that we are compelled to do to get at the interior of the oven to take out some.

Q. As I take it, loaves right at the front do not bake quite as fast as those well into the oven?

A. Yes.

Q. And you attempt by manipulation to equalize that? There is nothing pronounced about that, no. I have observed the man doing that with a few loaves."

Pumpernickel and Vienna breads are very dry. They are baked hard and dry and crusty. More of the moisture is baked out of these loaves because they are placed on the hearth of the oven, and baked all over.

Henry L. Epner, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live at 821 So. 11th Street, Lincoln, Nebraska, I am a baker doing business in Lincoln under the name of the Goodey Bakery. I am the owner and proprietor. I have been engaged in the baking business since 1898. I have been in business for myself for the past twenty years. My out-
[fol. 223] put is about three thousand loaves a day; excepting about three hundred loaves, we bake nothing but pound loaves. We scale the dough at about nineteen ounces; the baked weight is from fifteen to seventeen ounces. We bake bread on Sunday, Monday, Tuesday, Wednesday, Thursday and Friday. On Friday we start at eight o'clock in the morning and get through about eight or nine o'clock at night. We begin baking again on Sunday morning about six o'clock. We wrap all our bread. We sell about 40% of our output in Lincoln, and the balance is sold out in the State. We sell our bread to groceries and delicatessens; mostly to people who sell it retail. We deliver this bread to them by express. We ship as far West as Gothenburg, Nebraska, which is on the Burlington, I believe. We also ship as far as Washington, Kansas, Superior and Wakefield, Nebraska. We send the retailers at these points wrapped bread. We ship bread to these points every day. We ship Sunday baked bread to our customers at Gothenburg, Nebraska, for Monday sales. For Saturday sales, we furnish the retailer Friday baked bread. I consider bread that is over 24 hours old as stale bread. I think our bread would be good to eat for about two or three days. We do not intend to sell anything but fresh bread. The public demands fresh bread.

"Q. State whether or not you suffer any material loss by stale bread?

A. Well, we do to a certain extent."

[fol. 224] We pick up bread around Lincoln as stale bread when it becomes a day old. The bread we ship to Superior and Wakefield, Nebraska, arrives at those points Monday morning.

I am one of the plaintiffs in this suit. I believe that I could do business under the varying conditions which exist in the baking industry under what is known as the Nebraska Standard Weight Law. I am afraid that it would be necessary for us to scale our dough a little greater under the

law. I have made no tests to determine the amount of loss in baking by evaporation, but we watch our weights very close every day as we go. If a loaf of bread is scaled at exactly 19 ounces, I can't tell you what that particular loaf would weigh when baked. It depends upon the temperature of the oven and the baking time; there is so many different things in the oven that would take moisture out of this loaf; sometimes it would vary an ounce. In August, 1923, I received a notice from the Department of Agriculture sent by Grant Shumway, which required me to submit and operate under the terms of the 1923 Bread law. I did conform to the provisions of this law until the following year when it was declared unconstitutional. It cost us more to operate under that law. I don't remember that we were prosecuted or in any way criticized because of failure to live up to the law while it was in operation. We [fol. 225] sold legal weight loaves during that period as near as we could.

"Q. What is the fact whether the loaves were really 16 ounce loaves, the legal loaves, during that period that you offered them for sale?

A. We had to scale heavy enough so they would be 16 ounces.

Q. And that is what you did do?

A. Yes, sir."

SAMUEL W. BAILEY, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live at 2030 South Eighth Street, Lincoln, Nebraska, I am in the bakery business and am connected with the Gooch Products Company, operating in Lincoln and Council Bluffs, Iowa. I am superintendent of production at both plants. I have been in the baking business for about 20 years, and with the Gooch Food Products Company four and one-half years. We bake loaves varying from one pound to four pounds.

I scale my dough for the one pound loaf from sixteen and three-quarters to eighteen ounces.

Q. When you say that do you mean at certain times you scale it at sixteen and three-quarters ounces, or is that

close enough for the man scaling the dough if he gets it between those two weights?

[fol. 226] A. No, that depends on the type of bread I am making. Some loaves I scale heavier. In our local bread, I should say, the Pullman loaf we put out is the largest seller. That is a pan loaf. We scale the dough in that Pullman loaf at twenty-six ounces. As far as knowing what it will weigh when baked that is something we have never figured out yet because it varies.

Q. Have you weighed any of those loaves recently?

A. I have, yes.

Q. And judging from the loaves you have weighed just recently what do they weigh?

A. Well, I have weighed some of them that weighed 22 ounces.

Q. And did you scale those loaves at 27 ounces?

A. They were supposed to be scaled at 26 ounces.

Q. Do you know whether or not they were actually scaled at 26 ounces?

A. Not unless I was making a test on it."

I believe that my company is plaintiff in this case. It is opposed to the Nebraska Standard Weight Loaf law. Personally, I am in favor of anything that can be right, I am not in favor of this one that we have. They have made different provisions and, of course, I am not posted, I have had no chance to know just exactly what it is. I am opposed to it from what I have heard and know concerning it. According to what I have heard, it has got to weigh at a certain time, so much, and so many hours afterwards [fol. 227] it is supposed to weigh so much, and so on; it dare not weigh over that much at a certain time, and it is not supposed to weigh under that, that is the way I get it. If I understand it right, there is from two to three and a half percent tolerance, I think, that is it.

"Q. Do you think that is enough or too much?

A. Well, I would think about it, there is nobody ever been able to figure it out yet. Two or three or four percent tolerance might be enough at times and other times it might not be."

The reason I am opposed to the law would be, there is something to contend with here, that we have no control of; absolutely have no control of, we have limits here at

different times of the year that would be impossible to comply with.

"Q. Assuming, Mr. Bailey, that a law were provided and a figure greater than two or three per cent and which amount would in your estimation be sufficient to take care of the uncertain element, would you then be in favor of such a law?

A. Well, I can't say whether there would be any advantage of having it."

We bake every day except Saturday. We bake until about twelve o'clock Friday night, and start baking again at about two or three o'clock on Sunday afternoon. In the hot weather it is necessary for us to start baking earlier on Sunday in order to get our bread cooled and wrapped in time for shipping. At certain times of the year, we start baking on Sunday morning, particularly in the summer [fol. 228] time. The public always likes to get fresh bread. The store which sells the freshest bread usually makes the greatest sales. We deliver bread outside of Lincoln, both by express and by truck. I should say with our truck we go out about 75 to 90 miles; there is nothing authentic on that; that is just my idea.

So far as our own plant is concerned I am familiar with the practice in this State as to the shipping of bread.

"Q. And what other dealers do, you are not able to tell?

A. It has been my opinion that it is against the State law to market any unwrapped bread."

Excepting the truck that goes from Council Bluffs to Lincoln and back, all our outside bread is shipped by express. We sell and ship nothing but wrapped bread. We ship bread to the north and western parts of the State of Nebraska. I can mention one customer by the name of Smith, whom we have at Perdume and one at Halsey. I know we ship to Greeley, Nebraska. I would not care to answer the question as to what age bread is considered stale bread. In the months of August and September, I would say that a loaf of bread is edible at the end of 48 hours if proper care were taken in preserving it. I have seen bread 48 hours old which had already turned green. We send the customer out in the State as fresh bread as possible. To the Greeley customer we ship Sunday baked bread for

Monday consumption. The same thing holds true for towns north and west of Greeley.

[fol. 229] L. J. CRAMER, a witness in behalf of the defendants, testified as follows:

Examination in chief:

I live in Lincoln, Nebraska. I am Assistant State Chemist of the State of Nebraska. I am a graduate of the University of Nebraska with a Bachelor of Science degree in chemistry. I started work for the state in April, 1925, and have worked there since that date. We have a laboratory in my department and it is my duty to analyze foods, drugs, oils and liquors. Recently at the request of the Attorney General of the State, I made certain weights and tests of bread. I have recorded those tests. We used four different batches of twelve loaves each. These tests were made in the Bureau of Food Laboratory at the Nebraska State Capitol. In making these tests, we secured bread from the Goodey Bakery and Gooch Food Products Company of Lincoln. We used the Vienna for the unwrapped tests, and the ordinary white pan loaves for the wrapped tests. The Goodey loaf was a sort of a semi-pullman, about a pound in weight. In making the weights, we used the scales belonging to the department. It is a Dalton scale, which we have used for about four years in our general food test cases. The Bureau of Weights and Measures is under the Bureau of Foods, Drugs and Oils, and has an office in the same room where these tests were made. These scales [fol. 230] were tested by the state inspector of Weights and Measures last week, during the time the tests were being made. That inspection showed the scales to weigh accurately. The weights which we made were accurate to less than one-sixteenth of an ounce. The room in which we made the tests is probably seventy by one hundred twenty feet. It contains radiators and is steam heated. We began the tests on Tuesday, April 10, at nine o'clock in the morning. During the tests, we kept the loaves piled on one of the stone topped tables in the room. This table was about fifteen feet from two radiators. There was no thermostat in the room for the control of heat. The room was heated

continuously both day and night while the tests were in progress. The paper which is marked Exhibit I, represents the results of a test on twelve loaves on Goodey's Vienna unwrapped bread. Those loaves were brought into the department at nine o'clock on April 10th. The bread was received from the Goodey Bakery between eight-thirty and nine o'clock.

"Q. Have you any information as to when the bread was baked?

A. Yes, I have the bill for the bread.

Q. Does that bill state when the bread was baked?

A. No, but I asked the man who delivered it.

Q. Do you know from anything else than his representations as to when the bread was baked?

A. They got the order that I put in the day before, I [fol. 231] asked for bread baked that night.

Q. Now from your order and the representations made by the employe of the Goodey Bakery Company when was the bread actually baked?

A. It was baked during the night of April 9th."

Twelve loaves were used in each group. I weighed the loaves as indicated in defendant's exhibit #30, the time the bread was received, six hours afterwards, and then as indicated on the face of the Exhibit. I continued the experiment for one hundred twenty hours. The figures on the left running down from the top of the page refer to the individual loaves as marked by me. The notations near the bottom of the page represent the humidity in the room at the time of the weighing. The word "temperature" and the figures next to it, represent the temperature of the air in the room at the same time. These readings were made by me. Under the heading, "List of Loss from the Time Received", I calculated the weight in ounces which the loaves lost. At the extreme right of the page, the words, "Moisture 33.3%" represent the moisture when all of the twelve loaves were weighed. We ordered fifteen loaves of each, and used part of them in ascertaining the quantity of moisture contained in the baked loaf. By the figures "33.3%" I mean the amount of moisture contained in a loaf at 100 degrees Centigrade. The amount of moisture is ascertained by taking a loaf, putting it in the oven at 100 degrees Centigrade until it attains a constant weight.

[fol. 232] The sheet also shows the moisture originally contained in the loaf and the percentage of moisture. The figures contained in defendant's exhibit #30, represent the actual results of the tests made in these experiments. Defendants' Exhibit #31 represents the results of the experiment made with Goodey bread using a sort of semi Pullman wrapped loaf. This was received at the same time. The experiment and the record of it is practically parallel to that in Exhibit #30. The temperature and humidity are not noted on this exhibit because they are the same as in the experiment represented in Exhibit 30. At the right edge of the page the word "moisture" and the figures after it represent the percentage of moisture in a loaf belonging to the same group. Exhibit #31 represents the actual results of the experiment as it was conducted in our laboratory. Defendant's Exhibit #32 represents the results of the experiment made with Gooche's Vienna wrapped bread. The bread was all received at the same time and the experiments were all conducted together. The temperature and moisture at the various times when readings were made were the same as those recorded in Exhibit #30. The moisture in the bread used in this experiment was 28.6%. Twelve loaves were used and recorded. The experiment continued for about five days or one hundred twenty hours. Exhibit #32 represents the exact readings [fol. 233] as taken at the times indicated. Gooch's wrapped bread was used in the experiment which is recorded in defendant's Exhibit #33. Twelve loaves were used and the experiment lasted for one hundred twenty hours, as indicated at the top of the page. The experiments were conducted with the others and the readings were made at the same time, as nearly as practical. The temperature and humidity in the room were the same as that in Exhibit #30. The amount of moisture in the bread used in the experiment was 31.2%. Defendant's Exhibit #34 represents the temperature and humidity in the room at different hours when the weights were taken. The figures on that exhibit represents the actual readings at the times indicated.

The humidity in the room at the time these experiments were made was much lower than the humidity out of doors at the same times. I did not take readings of the humidity, but simply took the average humidity outside. We have an instrument by which humidity is ascertained in our lab-

oratory. It is my opinion that the humidity out of doors during the hot summer months is higher than the humidity was in this room when these experiments were performed. It is uncommon during the summer months for the humidity to remain low for a continuous period of five days like the period during which we performed these experiments.

[fol. 234] L. J. Cramer—Cross-examination:

I know nothing about the age of the loaves used excepting from the order I gave the baker and the representations made by the driver. Mr. Cecil helped in the making of these experiments. Exhibits Nos. 30 to 34, inclusive, are made in my handwriting. The figures represent the readings as given to me by Mr. Cecil. He weighed the loaves. I checked them and wrote the weights down.

L. J. Cramer—Redirect examination:

When I started these experiments, the loaves were apparently fresh loaves of bread.

"Q. Mr. Cramer, when Mr. Cecil made the readings and announced them state whether or not you then recorded them?

A. I did.

Q. Do you know whether the figures which you recorded were in all cases the exact figures he read and announced to you?

A. In my opinion they are."

Rollie E. Cecil, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live in Lincoln, Nebraska. I am Assistant State Chemist. I had all but one semester's work of the course in the University of Nebraska and have had about four years experience in laboratories. I have been connected with [fol. 235] the Department of Agriculture of the State of Nebraska since January 7th of this year. I work in that laboratory as assistant to Mr. Cramer. I did the weighing. He checked and recorded the weights. We worked

together throughout the experiments. Exhibits 1 to 5, (or 30 to 34 inclusive) are actually the records made in the experiment.

"Q. Did you read the figures accurately and give them to Mr. Cramer in the manner in which he could hear and understand them and record them?

A. Yes sir, to within one-sixteenth of an ounce."

Mr. Cramer made the readings with reference to the humidity and temperature. Mr. Cramer ordered the bread. I helped to receive it. It appeared then to be very fresh. We used the scale in these tests described by Mr. Cramer. The loaves were kept on the stone tables in the laboratory. It was stacked in four separate piles of 12 each, not too closely together. Each loaf was labeled so that the identity of the loaf could be maintained throughout the experiment. Mr. Cramer did this labeling and marking.

MOTOS WENDELIN, a witness in behalf of the defendants, testified as follows:

Direct examination:

I reside at 3002 Sewell Street, Lincoln, Nebraska. I am a baker by trade. I conduct a baking establishment in Lincoln under the name of Wendelin Baking Company. I [fol. 236] have been in this business for thirty-three years.

"Q. Are you one of the plaintiffs in the suit of P. F. Petersen Baking Company against the Governor of the State of Nebraska?

A. Well, I don't really know all about it, no, I don't just know all the facts about it. I know my name is used as a party plaintiff. I was with the Tip Top Baking Company when this suit was started and that company was a party to the suit."

My output of bread is about 3000 loaves per day. I make a pound loaf, a pound and a half loaf and a twenty-two ounce loaf. I scale the dough at 18 ounces to make a pound loaf. The baked weight of that loaf varies a little, not much; it weighs a pound. I wrap my bread. The demand of the public is for fresh bread. Most of my bread

is sold here in Lincoln. I ship a little: I don't consider my bread stale until about the third day. Wrapping bread keeps it fresh for a longer time. I am opposed to the Standard Weight Bread Law.

"Q. Do you believe Mr. Wendelin that you would be able to conduct your business under a law like the Standard Weight Bread law in Nebraska?

A. At times I would be, other times it would be very hard, there is some months of the year that it would be very hard to keep the bread right up to a certain weight. [fol. 237] During the hot summer months I would not hold bread for sale longer than three days. In those three days in the hot summer months I can't say what a pound loaf would lose in weight as we wrap it, I never kept track of it just exactly, but it would lose, I am sure. The Tip Top Company was not prosecuted for underweight bread during 1923.

"Q. Have you ever attempted to conform to the recent 1927 bread weight law of this State?

A. Well, at the present time, that is since I have been out there, I have tried to hold my bread as near that weight as I possibly could, that is what I mean, I tried to have it at about that weight.

Q. Have you been able to do it?

A. I haven't watched it so close that I could get it exact, I never weighed the stale bread when it came back, but when my bread goes out we have the balance on that weight."

I mean 16 ounce weight. It is my understanding that the law compels bread loaves to weigh either 16 or 24 ounces. I believe a loaf can weigh a little over, but not under those weights.

"Q. Does it make any difference whether it is up or down as to your ability to keep within the margin?

A. Why, yes, I do, I think if I understand it at the present time it is three ounces over and not under, I think it is too much over.

Q. You think three and a half ounces is more of a toler- [fol. 238] ance than is necessary in order to keep the bread within the legal loaf?

A. To my opinion I would sooner see the law with the ounces each way, or one and one-half over and one ounce under, I don't like the idea of three and one-half ounces over, I would sooner keep it more. Bakers can sell their bread and have three and a half ounces."

It is my opinion that most of the hostility to the law arises out of the feeling that it is unfair because it does not permit a tolerance below and compels the baker to stay above it at all times.

Q. Would you be satisfied, do you feel you could conform your business under a State law which provided for one ounce below the 16 ounces and one ounce above?

A. To split that three and one-half in some way, split three ounces would be better for the bakers. I think if they had a three ounce tolerance and split it the way I indicated I could conform the business and practice in a way that I would not suffer any financial loss.

[fol. 239] ELWIN S. MARTIN, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live in Fremont, Nebraska. I am a dough mixer and baker connected with the Vienna Bakery of Fremont. Our output is about one thousand loaves per day. I have been connected with the baking industry for about six years. We bake the Vienna roll, poppy seed roll bread, and whole wheat bread, as well as the plain white bread. About three-fourths of the bread is plain white pan bread. We bake one pound and 1½ pound loaves. We have made certain tests to determine evaporation. In these tests we used both wrapped and unwrapped bread. We used for the wrapped bread the Vienna and plain white loaf. For the unwrapped bread we used the Vienna. In practice we wrap the graham bread and the whole wheat bread and the plain white bread. Ordinarily, we leave the Vienna loaf unwrapped. About three-fourths of our output is shipped out of the City of Fremont. In making these tests, I did the weighing and made the record. The scale we used has been tested by the Weight Department of the State. This is the same scale that we use in our business. The scaling

weight of the dough was 19 ounces. We used 10 loaves in each group. Referring to the white bread which were wrapped, the weight was 16¾ ounces. 13 hours after baking, the average weight was 16¾ ounces. 24 hours [fol. 240] after baking the weight was 16½ ounces. 49 hours after baking the average weight was 16½ ounces. 61 hours after baking the average weight was 16¼ ounces. The ten loaves of Vienna bread which were left unwrapped were sealed at 19 ounces. They weighed on the average 16¾ ounces when baked. 13 hours after baking they weighed on the average of 16 ounces. 25 hours after baking they weighed 16 ounces. 37 hours after baking, they weighed 15½ ounces. 49 hours after baking, they weighed 15¼ ounces. 61 hours after baking they weighed 15 ounces. These results are summarized in defendants' Exhibit #35.

Millard V. Robbins, a witness in behalf of the defendants, testified as follows:

Direct examination:

I am meteorologist of the United States Weather Bureau located on the fourth floor of the Post office Building, Omaha, Nebraska. I have been connected with the Weather Bureau for 31 years. Exhibit 36 is the annual meteorological summary for 1928. The weather bureau is part of the Department of Agriculture of the United States. All offices are under the general supervision of the chief of the bureau at Washington, D. C. The records of the Omaha station are kept under my supervision. The matter recorded in defendants' exhibit #36 is kept at the Omaha [fol. 241] Station, and the record is printed in Omaha. Most of the stations excepting the very small ones keep practically the same data and print reports similar to this one. The local station must follow general regulations in the keeping of data, but the manner in which the report is made is left to the individual station. We report to the Department of Agriculture at Washington. These are printed like Exhibit #36. Many of our original records are sent to the Central Office for temporary file, and some are sent there for permanent file. Referring to the humidity column in the exhibit, the 81.2 at the top is the average

humidity for January covering the past forty years. The 66 is the average noon reading for the month of January covering the past eleven years. By "Relative Humidity Percent" is meant the amount of moisture present as compared to the possible, or 100%, at the temperature when the reading is made. As the temperature varies, the capacity to hold moisture varies. The amount of evaporation taking place in food, for example, would vary with the temperature and movement of air about it. For practical purposes, I believe the barometrical fluctuations have no effect on it. If food is kept in a container so as to prevent air movement, the amount of evaporation would depend on the moisture in the air and the temperature. In an air tight container if the temperature were kept [fol. 242] constant, the amount of the evaporation would depend on the humidity of the air. The moisture in the article and the moisture in the surrounding air would tend to equalize. Generally speaking, the humidity of the air out of doors in the summer time is somewhat higher than the humidity of the air in a room which is artifically heated.

H. E. Bell, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live at 5002 Capitol Avenue, Omaha, Nebraska. I am General Manager of the O. P. Skaggs System. I have been connected with that system for about one and one half years. I assisted Mr. Wehr in certain experiments. I weighed the bread when Mr. Wehr was not present, and made the record. Defendants' Exhibits Nos. 37, 38 and 39 are copies of the records kept in the course of the experiments. These experiments were started April 10, 1928. We used in them 16 ounce white loaves, 16 ounce health loaves, and 16 ounce raisin loaves. Exhibit #37 represents the results of the experiments conducted with bread purchased April 10 from retail stores. They were purchased by Mr. Wehr. The first table refers to Butternut Bread. It was white and was wrapped. It is the output of the Schulze Baking Company. The second series of ex-

periments were conducted with Peter Pan white wrapped bread purchased from the same store. When the bread [fol. 243] was received, it appeared to be fresh bread. In my opinion, it was not more than eight or ten hours old. Three different brands of bread were used in the experiments recorded in defendants' Exhibit #37. The bread was weighed for 240 hours as indicated by the figures at the top of each table. The records made for the day time were made by me. Those for the night time were made by Mr. Wehr. We used Toledo scales for the weighing. These scales were tested by the State Department on the date we started the experiments. We used four loaves for each test. We weighed each loaf separately. Loaves purchased were wrapped at the time they were received. The weighings at 8:50 A. M. were made by me. Those at 2:50 P. M. were made by both myself and Mr. Wehr. Exhibits #38 and #39 are records of experiments made with our own white, health and raisin breads using 16 ounce loaves. These experiments were conducted at the same time as those recorded in Exhibit #37.

HENRY W. WEHR, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live at 621 No. 21st St., Omaha. I am a baker by trade. I have been a baker for 12 years and am now connected with the O. P. Skaggs System Bakery. For a time, I was with the Continental Mill and Bakery of Chicago, and have [fol. 244] been in business for myself. I am now in charge of the baking operations in the Skaggs Bakery at Omaha. Exhibits Nos. 37, 38 and 39 show the results of the experiments made at Mr. Strehlow's request. They were conducted in Mr. Bell's office on the second floor of the bakery. Bread was placed on tables and in rows of five. The temperature of the room was approximately 70 degrees. The room is steam heated. The bread was about 10 feet from the steam radiator. I purchased the bread used in Exhibit #37 at Cook's Grocery store. I purchased Butternut, Peter Pan and Old Home bread. I ordered them the morning of April 10. I ordered fresh bread and know that it

was fresh bread when I received it. It was wrapped bread. I conducted the experiment with these loaves in the same condition and wrapped as they were received. The scales were kept in Mr. Bell's office and were tested on April 9. Readings were made to within one-fourth of an ounce. The loaves were numbered in each group. The bread used and recorded in Exhibits 38 and 39 was from our own supply, taken out of our store room. The weighings were made by Mr. Bell and myself. I prepared the exhibits. Mr. Bell's figures were copied by me from his sheet. The record as contained in Exhibits #37, #38 and #39 are accurate and correct tabulations of the results of the experiments. Our own bread was made from white flour, sugar, salt, malt, milk and yeast. We used bakers' high [fol. 245] grade patent flour. Both the bread which we ourselves baked and that which we bought at Cook's Grocery were made from high grade materials. Bread is considered stale when it becomes 36 to 40 hours old. The temperature at which the bread was kept was about 70 degrees at all times. The temperature in this room was about the same as you will ordinarily find in grocery stores in the winter time when they are artificially heated.

Henry W. Wehr—Cross-examination:

Mr. Bell had another set of sheets which he wrote out in his own hand writing. I copied them. I have never run a country store.

Lorenzo Dow Pickard, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live at 3457 South 15th Street, Omaha. I am chief clerk at the Union station and work for the Railway Express Company. It is my duty to look after the shipping of express in general at the station. I have been at the Union Station in this capacity since 1917. Bread is shipped out of Omaha and handled by my company at the Union Station. P. F. Petersen Baking Company ships its bread in paper boxes. They are corrugated mullen test shipper's boxes. These boxes are held together by adhe- [fol. 246] sive tape. The Schulze Baking Company of

Omaha and the Rex Baking Company of Omaha also use this same type of box in shipping bread. I believe the Quaker Baking Company also use the same type of box. The Standard Bakeries Corporation use the same type of box exclusively. O. P. Skaggs System Bakeries use both the paper box and a container called a bread basket. This basket is a hamper. It looks like a box, is rigid, has a lid, and for all practical purposes it is a wooden box. However, it is not a real tightly enclosed box. The paper box containers sometimes break open, and we are able to see the condition of the contents.

We furnish 24 hour service and bakers ordinarily have their bread at the station an hour before train time. Many thousands of pounds of bread are shipped and go out on practically every passenger and express train. Whenever boxes have broken open, I have always found the loaves to be wrapped. There are four trunk or through lines passing through Omaha. The railroads entering Omaha are the M. & O., Northwestern, Missouri Pacific, Wabash, Illinois Central, Union Pacific, Burlington, Rock Island, Great Western and the Chicago, Milwaukee & St. Paul. I know the address to which the bread is going as the consignee's name appears on the container. Bread is shipped out of Omaha to neighboring States. From Omaha, we [fol. 247] ship to Missouri, Iowa, South Dakota, and Kansas. It is possible some goes to Colorado and Wyoming, but I do not at present recall the points. All of the railroads mentioned enter the Union Station, excepting the Burlington, the Chicago Great Western and the M. & O. The City of Chadron, Nebraska, is in the northwestern part of the State. It is on the Chicago & Northwestern Railway. To reach Chadron on Monday a shipment would arrive at Chadron at 4:30 A. M. Monday morning. A shipment to Harrison, Nebraska, would arrive at 7:45 A. M. If a shipment were placed on No. 10 leaving Omaha at 3:45, it would arrive at Rushville, Gordon or Valentine, which are east of Chadron at 4:30 A. M. We have a train on this road which leaves Omaha later Sunday and serves this territory early Monday morning. That train leaves Omaha at 11:45 P. M. and arrives at Chadron at 3:20 P. M. on Monday. Gering, Nebraska, is on the Union Pacific on what is called the North Platte branch. A shipment to arrive in Gering early Monday morning would leave

Omaha on train No. 3 at 6:30 P. M. It would arrive at Gering at 11:35 Monday morning. Kimball, Nebraska, is on the Union Pacific main line. A shipment to that point would arrive at 7:14 A. M. leaving Omaha Sunday at 6:30 P. M.

Some of the stations in small towns are closed on Sundays. Bread is not shipped out of Omaha on Saturday night to reach any of those points on Sunday. The bakers furnish us the bread practically an hour before the time [fol. 248] of departure of the train on which they want the bread sent. Friday is the heaviest day for shipment of bread. This bread is shipped for Saturday's business. Bread intended for Monday's business is shipped on Sunday, usually beginning Sunday noon, depending on when the train leaves Omaha. I do not know of any point in Nebraska which cannot be reached by express in 20 hours from Omaha.

"Q. About how many trains carrying express leave Omaha on the Union Pacific Road?

A. All points are not served by the same trains, therefore it might only be one in 24 hours.

Q. Is there such a thing as a main line west on the Union Pacific?

A. Yes.

Q. About how many trains carrying express go west on that main line?

A. Mr. Strehlow, probably you are not familiar with the circumstances that the railroads work under. All trains do not stop at all stations, therefore, unless you name some individual point along this line, I could not say. I could tell you how many trains we have out of Omaha on this main line to any given point."

I am familiar with the manner in which express is packed and arranged in express cars. They are arranged in what we call station order. Parcels are not shifted except in case of emergency of some kind. These are arranged in the order of stations so that there are no parcels in front when a station is reached. The thought in mind is to prevent all possible delay in delivery. Our company has [fol. 249] regulations with reference to placing of bread or other perishables near heating pipes. That regulation absolutely requires them to be kept away from pipes. The

packing of these parcels in express cars is supervised at the station by our general foreman. He works under the depot agent. Mr. A. B. Glassbrook has supervision of terminal service, and I am his chief clerk. For a time I was messenger on an express train, and I have an opinion as to the temperature of express coaches as compared to railway coaches. I believe that they are a little cooler. This coolness is regulated by the opening and closing of doors or overhead drafts. I was on duty as a messenger several years off and on. From my experience as a messenger and my experience at the Union Station, I know that express is shifted only sufficiently to make room in case of emergency.

ERNEST VINCENT GIBSON, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live at 3481 Larimore Avenue, Omaha. I am agent for the railroad express company at the Burlington Station, Omaha. I have been at this station since 1911. I am familiar with the stations in Nebraska which are served from the Burlington road and on the M. & O. The whole- [fol. 250] sale baking firms operating in Omaha ship in wooden boxes and paper cartons. To my knowledge none of them use open containers. The paper cartons are sealed on the top and bottom with a piece of paper tape. The Standard Bakeries, P. F. Petersen, Schulze and Jay Burns Baking Company use the paper carton. Burns also uses the wooden box. Where cartons have broken open I have noticed individual loaves of bread wrapped in wax paper. During the past few years, I have not seen any bread shipped in cartons, which was not wrapped in waxed paper. The southern half of the State of Nebraska is served by the Burlington road. The towns of Erickson in Wheeler County, Burwell in Garfield, and Sargent in Custer County, are served by the Burlington. A branch of the Burlington serves the towns of Crawford and Alliance. For early morning delivery, it would leave Omaha on No. 43 at 10:55 P. M. for midday arrival. A parcel for Grant, Nebraska, would leave Omaha on No. 9 at 11:50 P. M. It would trans-

fer at Holdrege and would arrive at its destination before noon. A parcel for Benkelman, Nebraska, would leave Omaha on Sunday night at 11:50 P. M. and would be delivered there at 8:06 A. M. Monday. Bread parcels are not as a rule stored in the express office. They are usually received from thirty minutes to two hours before the departure of the train. They are assorted on platform trucks for particular trains, and the truck is stored inside the [fol. 251] depot. At the time of loading parcels into the express car, they are arranged and piled for transportation points in station order as near as practicable. These express cars are heated during the winter. The express company has a rule forbidding the loading of perishables near steam pipes. Cartons of bread are never placed near these pipes. On the Burlington there are two types of cars: one with two doors, a door on each side, and the other with four doors, two doors on each side. In the winter time, these doors are commonly kept closed. In the summer time, I would say that the temperature in an express car is cooler than it is in the passenger coaches.

Ernest Vincent Gibson—Cross-examination:

It would be cooler because of better ventilation than a passenger car. I do not mean to say that the railroad takes better care of its express packages than it does of its human kind.

"Q. How can you tell whether your order concerning perishable goods is carried out by your freight agents in the cars?

A. The loading at Omaha for instance is supervised and a great deal of the actual loading done by employees at Omaha.

Q. After the car leaves Omaha you have no means of knowing where stuff is put by the express men in the cars?

A. As a rule it is left right where we load it.

Q. How do you know that fact?

A. We do not.

Q. Then it is utterly impossible for you to know what [fol. 252] changes may be made in the car on its way to destination?

A. Except for the agents at other points along the line.

Q. How do they know?

A. By entering the car.

Q. As a matter of fact you do not get any information as a rule, do you, about your shipments after they leave Omaha?

A. Not unless something goes wrong.

Q. The only thing would be a complaint on the part of some of the consignees?

A. Yes."

Ernest Vincent Gibson—Redirect examination:

In loading perishables, we place the Lincoln consignment nearest the door because that is the first unloading point on a through train. Consignments to other stations are grouped in order behind that. There is no purpose in shifting these parcels except that they are brought near the door to facilitate unloading, as the train nears the station for which they are intended.

CHARLES P. EHLERS, a witness in behalf of the defendants, testified as follows:

Direct examination:

My name is Charles P. Ehlers. I live at 2238 East Michigan Street, Indianapolis, Indiana. I am at present secretary and manager of the Indiana Bakers Association. I went into the baking business in 1913. I sold my business in 1924, and since then have been devoting practically [fol. 253] all of my time to Association work. While I was still in the bakery business, I served one term as president of the Association. Our membership is about two hundred fifty, distributed over the State. I am familiar with the Indiana Bread Weight Law. I travel considerably throughout the State and hold a number of district meetings in different sections during the year. The Indiana law went into effect in July, 1919. Shortly after the law went into effect, the Association sent out question-aires to all the bakers in the State. We found that about ninety-eight per cent were in favor of the State law. A few objected to the labeling of the loaf. Less than one per cent objected to the provision in the law relative to standardization of the weights. We have made surveys since that time with like results. There is no standard or uniform

retail price for bread in Indiana. It varies considerably in different sections of the State and varies from time to time. At the present time a pound loaf sells from anywhere from five to ten cents. This variation is distributed quite generally throughout the State.

"Q. Were you in the baking business at the time the law was passed by the legislature?

A. Yes, sir; I was.

Q. What would you say from your experience, as to whether or not there was a demand or desire on the part of the bread eating public for such a law?

A. Well, my contact with the customers in my store—. my business was mostly retail, was that they knew what [fol. 254] they were getting. They went into the store and asked for a loaf of bread, generally designated as a small loaf or large loaf; they got a pound loaf if they wanted a small loaf, or a pound and one-half loaf if they wanted a large loaf. Before we had the law we had loaves of bread weighing from 10 ounces up to 16 and 18." The reaction on the purchasing public was, I think it had a tendency to establish confidence in the bakers. I have no opinion as to whether it effected business in any way or not; I wouldn't say as to that. At the time that the bread law went into effect in Indiana, there was no financial loss of any kind that I know of sustained by the bakers in order to comply with the provisions of the law. As far as increasing business or decreasing business, as time went on, I couldn't say it had any effect. For one thing, it stabilized the market and bakers didn't have to have three or four sets of pans. They said "Now, we will get our pound pans, or pound and a half units, *or pound and a half units,* what we are going to make. And we have been using 17 or 20 ounce loaf, or whatever they have been making; we would just junk those pans, and standardize on two sets of pans, and use those until they wear out." The same thing applies to wrappers; all we have is the one pound and one and one-half pound wrappers. Its effect on fair or unfair competition was that everybody was compelled [fol. 255] to make the same size loaf of bread. Then it was up to the people to judge the loaf they liked best, regardless of the price. Its effect was to increase the quality of the bread produced by the bakers generally. I have worked very close to Mr. Miller, the enforcement officer.

If I find violations, I have called it to the attention of the baker and have asked him to remedy it. The baking industry has cooperated with the State in the enforcement of the law.

It is my opinion that the tolerance provision in our law is adequate. Assuming that the tolerance provision were changed from two to three and one-half ounces, I would say that it would be very easy for a baker to keep within that tolerance for 72 hours, even though it is necessary to ship bread at considerable distances, and even though there are climatic conditions which were unfavorable to the maintenance of fresh bread. From my experience in the baking industry we have found the tolerance provision in our law adequate.

"Q. Assuming, Mr. Ehlers, that this tolerance provision were changed so that instead of having a two ounce tolerance you had a tolerance of three and one-half ounces above the standard weight; in other words, above the 16 ounces or the one pound loaf; would you consider such a tolerance adequate in the State of Indiana for 12 hours after the loaf was baked?

A. Do I consider it would be adequate for the bread, or for the operation of the bakery? How do you mean that?

Q. I mean, would such a tolerance make it possible for [fol. 256] a baker to produce and maintain a loaf that was within the law?

A. Very easy."

If because of certain climatic conditions and conditions in connection with the baking industry, it was necessary to ship bread at a considerable distance, so that it would be kept for sixty or seventy-two hours before it was sold, and assuming that the law compelled the bread to remain within the tolerance provision during that period, it is my opinion that a tolerance of three and a half ounces is adequate, and that the bread could be kept within those limits. But we never have any occasion in Indiana to ship or hold bread that long. We have had no experience with that.

Bread in Indiana is first wrapped and then placed in paper boxes or wooden crates when shipped by express. I would say that less than one percent of the bread which is shipped is unwrapped. Practically one hundred percent is wrapped. Bread loses very little weight when wrapped,

even in dry and hot weather. It is my opinion that bread dries out more in grocery stores in the winter with artificial heat than it does in the summer when the weather is hot and dry.

If the tolerance provision in our law were 3½ ounces, I would say that we would not want the law at all. It would be so near a pound and a half loaf, if you would have that [fol. 257] much tolerance we wouldn't want any standard weight law. In my opinion, a baker can produce a loaf that weighs practically what he desires it, one ounce above, or one ounce under. I mean, take for instance, 25 loaves: any one loaf might weigh—I am figuring loaves now—might weigh seventeen ounces, another loaf might weigh fifteen ounces, but the 25 loaves should weigh twenty-five pounds. In actual practice a baker can so bake his bread that it will weigh that. They have done it in Indiana, since 1919, and I would say there hasn't been ten violations of the weight provisions of the law in that time.

GEORGE A. DAUT, a witness in behalf of the defendants, testified as follows:

Direct examination:

My name is George A. Daut, I live in Columbus, Ohio. At the present time, I am business manager and secretary of the Ohio Bakers Association. Our membership is about seven hundred bakers. This membership is scattered over the State. I have been with the Bakers Association since [fol. 258] 1928. Before that, I sold flour and was in the baking business for a while. During the World War, I served with the Food Administration for 13 months. I had charge of the baking department in Eastern Kentucky. My office had no connection with the Federal Government, excepting we received instructions and rulings which it was our duty to carry out. The first ruling made by Mr. Hoover as Food Administrator was an order requiring all bread to be sold by weight only, in pound and pound and a half loaves. There was no tolerance provision in this order. We had no difficulty in carrying out this order.

"Q. What experience did you have with reference to whether or not the bakers could comply with the ruling?

A. We had no difficulty. In fact, if anything, we had many compliments over the fact that it was a good thing, from the standpoint of fact that the smaller baker didn't have to make added investments in buying pans or change his machinery. He could standardize on his output, and proceed accordingly."

Since the war, there has been considerable variation in the retail price of bread. Quality breads sell commonly in Ohio for 12¢ and in Cincinnati for 14¢. Chain stores all sell bread cheaper. They retail at 10¢, in other words, what we wholesale at. The same conditions govern the pound loaf. The retail price on that except in the city of Cincinnati is 8¢; it wholesales at 7¢. I am talking about [fol. 259] bakers generally, non-members as well as members of our Association. The chain stores vary. For instance the Atlantic and Pacific Tea Company are run a little different than the Kroger are. The A. & P. policy is to work in what they call zones, under the guidanceship —I think they title these men vice-presidents. On an imaginery line from Sandusky south and east of the City of Dayton and Cincinnati, they are getting 7 and 10¢. West of those lines, under the jurisdiction of a man at Detroit, they are only getting 5 and 8¢.

I am familiar with the State Standard Weight Loaf Law. I have an opinion that we ought to have no tolerance, for the reason that we think that we should have a law that should make it compulsory for the baker to give a certain amount of standard bread; and that standard, or the weight of that bread should be determined after the bread has been baked and cooled, ready for the wrapping machine, because that is the time when we think we would have control of our product. By "we" I am referring to bakers generally of Ohio. In my opinion, it is possible for bakers to produce loaves to weigh a given amount, say 16 ounces. We are not satisfied with the tolerance provision of our law because of the way it is worded. It says that a bread should weigh 12 hours after baking; and the law goes further, and says that the weight shall be determined by the weighing of [fol. 260] 25 loaves. Our objection to that is this: That we do not average per stop ten loaves to a grocery store. We also find that most all the bread is sold within the first 12 hours after it is baked." I understand the law does not

mean that it may be weighed any time during the twelve hours; it distinctly reads that it must weigh, 12 hours after baking. We say that, take all of our grocery stores, you cannot find 25 loaves at one time. We think it has considerable effect on the enforcement of the law "because when the inspector goes into the grocery store, he is subjecting us to more or less criticism on the part of the consumer that witnesses that. We think that is going a step too far." Our Ohio law, however, is enforceable. In a recent poll which I took of bakers, by questionnaire, I found 90 percent of the bakers of the State favorable to the continuance of the Standard Weight Law. From the time bread is baked until it is ready for the wrapping machine, it will lose about three quarters of an ounce, to a pound. It is pretty hard to answer, what it will have lost in weight 24 hours after wrapping because the climatic conditions control that. Bread hauled as it is now a distance of 150 miles in some of these new trucks with aluminum sides, on a hot day, subjected to that heat and air tight truck, will shrink considerably more than it would if it was delivered immediately in the city. I have made no tests and have no opinion [fol. 261] as to how much it might shrink under the conditions described, while being transported a hundred miles.

I am one hundred percent in favor of the standardization of bread weights. I favor such a law because it means a saving of pans. It enables the baker to standardize on his various machines. "It would also do away with an unscrupulous baker giving a short weight loaf of bread and then overproofing the bread, so as to have the size, in relation to the eye appeal, when in reality the consumer was getting poorer quality, due to the over-expansion of the loaf. When you overproof bread, you are robbing the bread, first of its keeping qualities, and second of its flavor." And in so doing unquestionably you interfere with its nutritive value. I believe that a loaf of bread which has shrunk three and one-half ounces is still edible and salable. I do not think that a loaf of bread would shrink 3½ ounces under the most unfavorable weather conditions in Ohio in a period of 72 hours. I wouldn't be able to answer how much it is likely to shrink; it is too indefinite as to the amount of moisture, and heat, and other elements, so many conditions there. I don't think it could be answered. In my opinion, it would depend entirely on how the bread was

kept and under what conditions it was transported. How much it would shrink I cannot say. It would depend entirely on how it was kept and under what conditions it was [fol. 262] transported. If the tolerance provision in the law were increased to three and one-half ounces, I would say you would have no standard weight law at all. I think such a tolerance provision would be silly and extreme.

"Q. I suppose you are familiar with the arguments of the opponents of the standard weight loaf, with reference to its being difficult for the baker to take care of his business and give himself and the public a square deal, when the measure of money is as it is; a cent cannot be split. In other words, when the price changes of the ingredients, the monetary values cannot represent those changes properly. What would you say to that? Is there any truth to that, as a matter of fact?

A. No, I don't think so; because the baker does not buy his supplies daily, but he contracts for his supplies; and I think that the argument advanced would be easily taken care of by the times that he speaks about that it would be against his favor, he has just as many breaks the other way.

Q. As a matter of fact, do the bakers, as far as your experience goes, modify the size of loaves in the absence of a standard weight loaf, according to the ups and downs of the market on ingredients?

A. Competition usually guides that. If one baker should decrease his loaf, of course, the other fellows will follow.

Q. And is that always dependent upon the price of ingredients, or are there outside considerations?

A. I would say whatever competition does is whatever the majority will follow. If you have got the leading [fol. 263] bakery in the town, and you decrease the size of your loaf of bread and get away with it, the other fellow does the same thing."

George A. Daut—Cross-examination:

In the first place chain stores use bread as a football, namely, sell it at a loss in order to attract trade. In the second place, we, as bakers, admit that the chain stores using bread as a football, having a cash and carry plan, are able to sell the bread cheaper than what we are able to. There is no secret about it at all. That carried to its

logical conclusion, would not put the wholesalers out of business, for the simple fact that the chain stores using bread as a football never purchase a quality loaf of bread. By the use of the term "playing football" I mean that the chain stores have sold bread at an absolute loss. "And the only reason they are doing that is because in other states where they haven't got standard weight they are selling as much as nine ounces to a pound and a half loaf less to the public for the same price." They are selling short weight bread to the public.

I would not say that the best flour contains the most moisture. The greater the quantity of starch in flour, the greater is its power of absorption. For making bread, flours with high gluten content are the best. Moisture is [fol. 264] injected into ovens for the purpose of cutting down evaporation. It is possible for the baker to predetermine the baked weight of bread. A skilled baker learns how to do this the same as a carpenter learns how to build a house. A baker controls this by putting enough dough on the scale in order to get the required weight. He knows what the variation is from day to day. The baker of today knows exactly the amount of moisture in his dough. You know just how much moisture is going to evaporate out of that dough, before it goes into the oven, from the knowledge of being a baker. I wouldn't say there is a mechanical way of controlling it; there is a practical way, knowing the business. The baker, being familiar with his business, wouldn't guess at the quantity any more than what the miller guesses. "The miller is under the same condition that the baker is. You unload a car of flour on a rainy day, and your weight is going to be heavier than when you unload it on a dry day."

Q. Exactly. How does the baker know what degree of moisture is in the air?

A. I couldn't answer that question.

Q. He cannot tell, can he? It may be ten percent, twenty, thirty, forty, or fifty percent?

A. I don't think it varies like that.

Q. He can know in a general way that it is more moist on one day than it is another day; but he cannot know, can, he, as to the exact degree of moisture that is there in the air?

A. I would say that that condition would be under his [fol. 265] control, in view of the fact that after the dough has been made, he keeps his dough rooms at such temperatures today where he has absolute control. If he does not keep the temperatures in the room under his control he would be one of the bakers that would go out of business automatically."

During the world war, we scaled our dough at 18 ounces. With this we had no trouble in getting a pound loaf of bread under all conditions. There were some days we needed to scale it only 17½ ounces, depending upon weather conditions.

Q. Yes; but how are you going to determine what the weather conditions are, accurately?

A. Well, we know all the different doughs that we turn out. For instance, the first doughs that went out, we knew were the first to reach the public, and we knew in what condition and how they would reach the public. It was a pretty easy matter at four o'clock in the morning to know whether you thought you were going to have a shower of rain between that and noon. I would have no trouble to scale my dough. Tomorrow morning I would have no trouble to show a loaf of bread that would weigh a pound."

Three or four years ago when you weighed a lump of dough or put it in the pan, you wouldn't know whether it was going into the back part of the oven or the front part. "Today it is not true, because the oven business has changed. Now most large plants are using traveling ovens; so that there is no such thing as a back loaf of bread. They [fol. 266] go in back here automatically, and come out at this end automatically. They are heated every minute. Lots of the testimony that was taken in your Supreme Court case out there in Nebraska several years ago, it is all passé now." Every loaf is in the oven the exact second of time the same as every other loaf. I base that statement on what I have learned as a practical baker. I could put on a pair of overalls and make you a loaf right now; I don't care whether it is a small shop or a big shop.

There has been quite a few violations of our law in Ohio. We have secured a conviction in every case. About 90 percent of our bakers are in favor of the Standard Weight Law. The pan bread in Ohio is wrapped. Bakers are

beginning to wrap the hearth bread, during the last few months, but they used to be unwrapped. Vienna and rye breads are hearth breads. In baking those varieties, the baker scales his dough heavier. The reason for this is that the dough is not as rich as in the pan breads, and they bake out more. These doughs contain more moisture because a slacker dough is used. Moisture adds nothing to the food value. It is the nutrition of the loaf that gives food value, consisting mostly of good flour, the added milk, butter fat of the milk, the lards and sugars. The object of artificially putting moisture into an over where bread is being baked is to retain a soft, mellow crust. The [fol. 267] object of that is solely because the average American housewife thinks a loaf of bread is not fresh unless it is soft. Ninety-five percent of the bread that is bought today—you could go right down the street now, and I would lay you ten dollars to one that the woman that comes in to buy a loaf of bread buys it this way (indicating), by feeling it. The softest one is the one she likes. I am, personally, the other way. I want a hard loaf of bread. The loaf of bread that the housewife feels must yield to her touch, or she wouldn't think it was fresh bread. "I wouldn't say that she wants bread with moisture in it"; "she wants bread that she thinks is fresh. In her opinion that is the only way. It is only when it is soft, that it is fresh." Stale bread is dry bread as a rule. This is bread from which the moisture has evaporated. I would say that bread still has good food value without moisture,—toast for example. If all the moisture were evaporated from it, I would not call it palatable bread. We aim to give the consuming public as much bread as they think they are paying for. In other words, if a consumer buys a pound loaf of bread, it is the intention of the association to give him, the consumer, 16 ounces of bread.

George A. Daut—Redirect examination:

In my opinion the ordinary housewife can compare the [fol. 268] bargain she is getting where the weights, the quality and the price differ. I believe her problem is simplified where one of the variables is eliminated; the weights of the two loaves being made the same, for example. The

ordinary housewife who walks into a store, in my opinion, is able to judge of the bargain she is getting, if she buys a loaf of bread, we will say, that weighs 12 ounces, that she is paying 6¢ for and has a given quality, as compared to the bargain she would have if she paid 11¢ for a 16 ounce loaf of a different quality. In my opinion, it would simplify the matter of comparison if one of those variables were eliminated, for example, if you had a standard weight loaf, so that the only differences in the two loaves would not be in the weight, but simply in the price charged and the quality of the bread. That consideration has something to do with the desirability of the Standard Weight loaf law. Before I was secretary, I was a salesman for the Eagle Roller Mill Company of New Ulm, Minnesota. While working for them, I sold flour and demonstrated doughs. Bread brakes have not been used for years. They are now beginning to put in an appearance. I don't know of any being used in Ohio. They are used for the purpose of making a light fluffy loaf of bread. "My opinion is that they rob [fol. 269] the bread of its flavor. That is a matter of difference of opinion. Another man may sit across the table and say he don't think so." Toasting bread takes out practically all of the moisture. It changes the character of the bread, but does not affect its palatability. The age of bread and the manner in which it is exposed to the elements affects the question of its palatability. I consider bread which is 48 hours old stale bread. Bread becomes stale mostly because of its age. I do not know whether or not there is any chemical change, but I do know there is a distinct change of flavor. Bread will mold as quickly in a hot dry place as it will in a cold moist one. Bread which actually dries out also molds, if it is old enough.

CHARLES J. CRAMER, a witness in behalf of the defendants, testified as follows:

Direct examination:

My name is Charles J. Cramer. I live in Madison, Wisconsin. I am a baker by trade. I was a baker for about 30 years in Milwaukee, Wisconsin. I am now Dairy and Food Commissioner of the State of Wisconsin and ex officio

sealer of Weights and Measures for that State. The State of Wisconsin has a Standard Weight Loaf law. I am thoroughly familiar with the provisions of that law, and it is my duty to enforce its provisions. We have eight men [fol. 270] in my department and about 30 local dealers of Weights and Measures in various cities, whose duty it is to weigh bread. Where violations of the law are found by the local sealers, those violating are reported to us and we assist in the prosecution. This law went into effect in Wisconsin in 1923. Under our law, there is a tolerance of one and one-quarter ounces below and the same above the standard weight of 16 ounces for the small loaf. We have had little difficulty in the enforcement of our law. I believe that the tolerance provision in our law is more than adequate to take care of the situation. The baker can comply with the law under all conditions as they ordinarily exist in the State of Wisconsin. The bread must come up to weight at the time it is offered for sale, regardless of the length of time after baking. If the baker knows his business, he can bake a loaf that will weigh what he wants it to weigh. If the baker wishes to have a loaf that weighs 16½ ounces, for example, he can come to within a quarter to a half ounce of that weight under ordinary conditions. My department inspects bread which is shipped into the State and which is shipped from a considerable distance. All bread is inspected at the point where it is offered for sale. With ordinary care, the tolerance provision in our law is adequate under weather conditions in Wisconsin. I do not refer particularly to wrapped or unwrapped bread. [fol. 271] "I mean, if the bread is not wilfully exposed to abnormal conditions, and taken care of as bread ought to be taken care of." Bread in Wisconsin is either wrapped or is kept in show cases where it is protected against dust and contamination. Most of the bread shipped in Wisconsin is wrapped bread. Rye and half-rye are sometimes unwrapped. In my opinion a pound loaf of bread would not shrink more than 2 ounces under the most adverse conditions during the time it is offered for sale.

The average age of bread offered for sale is from 24 to 36 hours old. When bread is 36 hours old, it should be considered stale bread. During hot, sultry, weather, it should be retailed by the baker sooner than that, not because it loses weight, but because there is a tendency to

mould. Bread which is not particularly moist and is dried out is not inclined to mould. To produce a loaf which will be a legal loaf at all times in Wisconsin, it should weigh 18 ounces in the dough. That loaf would weigh slightly over a pound when baked. During the next 48 hours, it would not shrink more than one and a quarter ounces after it is cooled. After it had reached the age of 48 hours and up to the period of say 60 or 72 hours there would be very little loss in weight providing the atmospheric conditions did not materially change. Conditions found in stores artificially heated are worse for evaporation than are conditions during the hot and dry summer months. The seasons of the year do not make very much difference as to [fol. 272] the amount of evaporation which is likely to take place, while the bread is being exposed for sale.

There is no such thing in Wisconsin as a uniform or standard retail price for bread. If a loaf of bread were unwrapped and left exposed for 72 hours to the most severe conditions of heat and dryness, I would not consider that bread edible or salable, for table use. If a loaf of bread actually shrank 3½ ounces, I would consider it no longer edible, and no longer salable. If a merchant endeavors to sell bread of that kind, he would not be able to compete with other merchants. I was in the bakery business in Milwaukee when the Wisconsin law was passed. At that time, there was a decided demand on the part of the public for the standardization of loaves of bread. In nforcing the law, we have the cooperation of the baking industry. Generally speaking, the bakers are very much in favor of the law. Those who opposed it at that time are now strong advocates of it. Bread which is shipped into Wisconsin from Chicago and other Illinois cities complies with the provisions of our law.

There are benefits which have accrued to the baking industry from the passage of the law. "It has greatly eliminated unfair competition, has stabilized the price, and the people of Wisconsin now know what they are entitled to when buying bread by the loaf." The fact that the price of ingredients varies does not interfere with the practic- [fol. 273] ability of standardization in bread loaves. The price of a loaf of bread can be changed as readily as the price of other commodities. When the law was first passed in Wisconsin, some bakeries may have sustained temporary

loss in that they had pans and equipment for ten, eleven and twelve ounce loaves which were not adapted to the baking of a pound loaf. But they have saved much more than they lost by using standard pans and equipment since then. From observation during the years I have been a baker and enforcement officer, it is my opinion that, before we had a standard law, as the price of ingredients varied from time to time, the size of the loaf also varied, not so much as the price of the materials varied, but as the bakers put out special sales efforts, and as the competition they had in certain localities. From our experience in Wisconsin I would say that the bakers of any other state, like Nebraska, would not be likely to suffer any loss by a similar law going into effect, if atmospheric conditions in Nebraska were studied, and the law adapted to suit the peculiar atmospheric conditions, if in fact they are peculiar. I wouldn't say whether they are or not. If a law was passed which contained an adequate tolerance provision, it is my opinion that there would not be any loss suffered by the bakers. Assuming that what some of the Nebraska bakers claim is true, that if this Nebraska law goes into effect [fol. 274] they will lose large sums of money, I do think, if they would have a material loss, the loss would accrue because they had to sell bread of a given weight, where they are not compelled without a law to give a specific weight. That would be a smaller return they would have to accept, due to competitive conditions, and the law.

Charles J. Cramer—Cross-examination:

There have not been many violations of the Wisconsin law. Rye bread has been sold chiefly unwrapped in the past. White bread is generally wrapped. I would say that about 25 or 30 per cent of bread in Wisconsin is not wrapped. That consists of rye bread and some wheat breads with hard crusts. Under the Wisconsin law bakers need fewer pans. Before the law went into effect, it was the custom to bake many sizes. When a baker changed the size of the loaf, it was necessary for him to buy new pans. A loaf when baked in the 16 ounce pan, I would say, might vary 3 ounces either way, without utterly spoiling the bread. Experts say that you cannot go an ounce either way without in some measure harming the bread. So that if the baker wanted to have a 15 ounce loaf he would have

to use a different pan, according to some experts, having in mind the form and the symmetry of the loaf, and just how the baked loaf should compare with the size of the pan. But it would not make the loaf any less valuable as far as food is concerned, or any less palatable, or any less nutritious.

There is no food directly in the moisture, but it is re-
[fol. 275] quired for palatability. If bread contained no moisture, it would not be so palatable, and it would be difficult to digest. It would not be utilized as well in the system as when it is properly prepared. It is not only the moisture that makes bread palatable, it is also the flavor. The flavor of fresh bread is appreciably different than the flavor of bread which has become stale. I believe the preference is due entirely to the flavor and not to the moisture.

"Q. Well, the flavor of a given loaf of bread will depend very largely, won't it, upon the ingredients used in the dough, and also in the baking process?

A. To some extent, yes sir; and the manipulation during the manufacture of the bread into loaves; the modification of the flour and other ingredients that takes place during the preparation and beating."

Charles J. Cramer—Redirect examination:

There is considerably less evaporation in bread that is made of good ingredients such as good quality of flour, milk, lard, sugar, etc. Since the passage of the Wisconsin law, I believe the quality of bread has materially improved. I believe this is due to the fact that competition is confined to two things, namely, to quality and price. Before we had standardization, competition went also into the size of the loaf. Some bakers would puff up the loaf so that it would look large. In fact, it would not have as much nour-
[fol. 276] ishment as a smaller loaf, but the housewife would buy it thinking she was getting more food value for the money.

Charles J. Cramer—Recross-examination:

Our law does not attempt to regulate the size or shape of the loaf. It concerns itself only with the weight. Ordinarily the flour which has the most gluten is the best flour provided the gluten is the right quality. I would not say

that flour with the most gluten contains the most moisture. Our tests do not show that. The moisture content varies during storage. Bread made out of the best ingredients does not lose moisture as fast as that made out of inferior ingredients. That applies particularly to flour. That opinion is based on tests we have made and on my experience as a baker. Inferior flours have at times greater absorption power. That is, it takes on more water than a better flour will, but it does not retain it. Evaporation during baking is probably not greater when inferior flour is used, but after baking it is considerably greater. Flours have two qualities, viz: To absorb moisture while it is being made into dough; to retain moisture after it has been baked into bread. Starch contains much less moisture than does flour. Starch has been used to adulterate flour.

"Q. Do you know that starch is used to adulterate bread?

A. No. I would say it has been used.

[fol. 277] Q. And do you know whether or not starch contains much moisture or not, relative to flour?

A. I believe starch contains much less moisture than flour does.

Q. So there would be less evaporation in any given loaf which was adulterated with starch than there would be in one without the starch?

A. I wouldn't say that. You see, when starch is being used, or when it has been used—let me put it that way—it is gelatinized, and then of course, it contains a great amount of water.

Q. By "gelatinized," do you mean having the little sacs broken?

A. The little starch kernels broken, yes sir; and turned into a paste."

It requires the presence of heat and moisture to break these starch kernels; if there is not the requisite amount of heat they are not all broken and where they are not all broken it is an inferior quality of bread, and where they are all *bread* it is also an inferior kind of bread where an appreciable amount of starch is added.

Charles J. Cramer—Redirect examination:

There are a great many people in Milwaukee of German and Scandinavian descent. These people often buy un-

wrapped bread. Since the Wisconsin Bread Law went into effect, I have not seen any appreciable adulteration with starch. There is no object to adulterate bread with starch in order to affect its weight. By the use of inferior ingredients a smaller loaf of bread is produced. Cheaper grades [fol. 278] of flour take on more moisture. They also lose it faster. It is possible to bake bread with a great deal of moisture so that it will lose that moisture and its weight very rapidly. If I wished to perform such an experiment, I would select flour of an inferior grade, use a great deal of moisture in making the dough, cover the pans or keep a great deal of moisture in the oven. If you were to make two batches of bread, one which was baked as described containing a great deal of moisture when it came out of the oven, and the other containing a normal amount, the bread with the large quantity of moisture would lose it much more rapidly and there would be a time as the bread aged when they would weigh practically the same amount. I did not refresh my memory before coming here, but off hand I would say that about forty to fifty per cent of the moisture which bread loses before becoming stale is lost during the first six hours. When bread first becomes stale it still contains considerable moisture. Assuming that certain experiments were made in which bread lost three to three and a half ounces in a period of 72 hours, I would say that the bread must have contained a great deal of moisture to begin with, or the flour used must have had very poor retaining qualities, or the bread must have been exposed to conditions which do not prevail when ordinary care is being used to preserve its edible properties. With ordinary care, bread under the most adverse conditions could not lose that much weight in that time. In my depart- [fol. 279] ment, I maintain a laboratory and seven chemists. When experiments such as I have described are made, they are supervised by me. I have made some personally and some in connection with the United States Department of Agriculture. Whenever the question of bread weights arose in the State, we made experiments with bread.

PAUL J. BRICKLEY, a witness in behalf of the defendants, testified as follows:

Direct examination:

My name is Paul J. Brickley. I live at Hartford City, Indiana. I am a baker by trade. My father was a baker and I have grown up with the bakery business. I have been in business for myself for nine and one-half or ten years. I operate under the name of C. I. Brickley & Son. I am president of the Indiana Bakers Association. There is not a standard or uniform selling price of bread in Indiana. I am familiar with the provisions of the Indiana law. The law has worked very satisfactorily for the past ten years. I do not believe that court action has ever been necessary to compel bakers to comply with the law. The enforcement officer has the good will and the cooperation of the baking fraternity. In my opinion, the baker can bake a loaf which weighs what he expects it to. Ordinarily, we scale a pound [fol. 280] and a half loaf of bread at 26½ ounces. When baked that loaf weighs 24 ounces. It must be kept within the tolerance provision for 24 hours under the law. During the 24 hour period, there is no appreciable loss in weight if the bread is fresh. We wrap our bread with the exception of a very few loaves. We ship nothing but wrapped bread. We scale our dough the same in all seasons of the year. When bread is wrapped and placed on the counter in a store artificially heated, I believe the conditions are about the same, as far as evaporation is concerned, as they are during the summer months exposed in the same place. If the bread is 24 hours old, very little evaporation takes place. In my opinion, a pound loaf of bread would not evaporate as much as 3½ ounces in 72 hours. I do not consider bread stale until it is 48 hours old, but bread 72 hours old would not be considered salable in Indiana. Bread shipped into our city is wrapped bread. We have never had difficulty in keeping within the provisions of the Standard Weight Loaf Law. I consider the tolerance provision of our law adequate. I am absolutely in favor of the Standard Weight Law.

"Q. What benefits, if any, from your experience, do you find that bakers derive from a standard weight loaf?

A. In the first place, the standardization lends to more honest merchandising to the consumer. Without a law, so many sized loaves can be made, and fraud brought about, [fol. 281] due to the consistency of that loaf.

Q. Does that in any manner reflect itself in the quantity of sales, and necessarily the financial results obtained in the baking industry?

Q. I am referring to the increased confidence that you spoke of.

A. Well, the consumer knows absolutely what they are going to get in weight, when they go in and designate whether they want a large or a small loaf. And I can't say as to quantity of sales. It works out very well for both parties, so far as I have ever been able to hear."

When the Indiana Standard Weight Law went into effect, bakers sustained no financial loss by being compelled to conform to its provisions.

Louis H. Rotter, a witness in behalf of the defendants, testified as follows:

Direct examination:

My name is Louis H. Rotter. I live in Milwaukee, Wisconsin. I am a wholesale baker and have a baking plant in Milwaukee. I bake about ten thousand loaves a day. I ship very little bread. I ship to Green Bay, Appleton and Sheboygan. When the Wisconsin law went into effect, I sustained no loss by reason of being compelled to operate under its provisions. My business has greatly increased since 1923, when the law went into effect.

"Q. What benefits if any, do you feel that you have enjoyed, while operating under this law?

A. In the first place, I have fewer weights to contend [fol. 282] with. We have very few pound loaves. However, it is a pound loaf. The next size is a pound and a half loaf. These are the two standard sizes; pound and pound and a half. If you want to have a double loaf on a pound loaf, you simply bake a two pound loaf. If you want to have a three pound loaf, you simply double up two 1½ pound loaves. It makes it much easier in operation.

Q. Are there any other benefits that you have enjoyed?

A. The benefits that we enjoyed, we know we are—we have got to live up to a 1½ pound loaf. So our standard

loaf is a 1½ pound. And the competitor, when he cuts the price, we know he is hurting himself. And we feel sure to a certain extent that he is giving a 1½ pound loaf for that price. Naturally, we feel as though the man cannot afford to do it, and the result will be that he will have to wake up one of these days, and see that he will have to come up to the price. The other way, it was a matter of cutting the price and cutting the weight, and it wasn't noticeable, the weight. And naturally he gypped the public, you know, and cashed in on it to some extent.

Q. Was that practice quite common in Milwaukee?

A. Years ago it was. Years ago we used to get in some of our competitors' loaves, and bread was wholesaling, for instance, for ten cents, some weighed only a pound and five ounces; a pound and six ounces at the most."

For our pound loaf we scale the dough at 18 ounces.

"Q. What does that generally weigh when it is baked? [fol. 283] A. That weighs around 16; sometimes 16 and sometimes half an ounce under."

We generally wrap our bread. I consider the tolerance provision of our law adequate to take care of all conditions as they exist in Milwaukee. Independent bakers' bread retails in Milwaukee at 12 and 13¢. Some stores sell for 12 and some for 13. One set of chain stores sells for 8¢ and another for 9. We consider bread stale when it gets 24 to 36 hours old. Bread 72 hours old might be edible but it would not be salable as fresh bread.

Louis H. Rotter—Cross-examination:

I was referring to a pound and a half loaf as weighing one pound and five or maybe six ounces in former years. The pound loaf would vary from 12, 13 and 14 ounces. The pound loaf would be under one pound and the pound and a half loaf would be under 24 ounces. The pound and a half loaf is the standard loaf. I had it more in my mind. In other words, there was pound loaves run through that we know of, of 13 and 14 ounces of bread, and the pound and a half would be about a pound and five or six ounces. That is what I had in mind when I spoke of gypping the public.

[fol. 284] JOSEPH POEHLMAN, a witness in behalf of the defendants, testified as follows:

Direct examination:

My name is Joseph Poehlman. I am president of the Joseph Poehlman Baking Company. I have been engaged in the baking business 47 years in Milwaukee. I was president of the Wisconsin Bakers Association for 13 years. My company is a corporation. There is no such thing in Milwaukee as a uniform or standard retail price for bread. I ship very little bread. I sell it at my own stores unwrapped. When the State Bread Law went into effect, we sustained no loss. I helped to promote the law and was very much in favor of it. I believe the baker is benefited by the law. A customer gets a more uniform loaf of bread. Before the law went into effect, there was an 8 ounce loaf, a 10 ounce, and an 11 ounce loaf.

"Then, of course, you know it was used to mislead the public; give them an 11 ounce loaf or 12 ounce loaf, and sell it for 5 or 6¢. Well, the other man made a pound loaf, and he couldn't sell it at that price.

Q. Was that rather common, before the law was passed?

A. Oh, yes; yes sir."

The law has given general satisfaction. Bread is commonly exposed for sale in show cases in Milwaukee. Some people have glass cases and some have cases built in the wall with glass sliding doors. My company has never had any trouble in complying with the law. I consider the [fol. 285] tolerance provision of our law adequate. I consider a loaf of bread stale when it is 24 hours old, although a loaf of bread four days old may still be palatable and nutritive. The American people all want fresh bread. Everybody asks for fresh loaves. I do not believe I could sell a loaf of bread in Milwaukee 72 hours old. The bakers in Milwaukee have accepted the law as an absolutely good law and are well satisfied with it. There are no objections whatever to it.

Joseph Poehlman—Cross-examination:

Our bread is generally delivered two or three hours after baking. Under the law, the purchaser gets 16 ounces of

bread. Before the law, he never knew what he got. Moisture in bread is largely to make it palatable.

FRANK KULLMANN, a witness in behalf of the defendants, testified as follows:

Direct examination:

My name is Frank Kullmann. I live in Milwaukee. I am a baker by trade. I have been in the baking business for 33 years. I do business under the name of Frank Kullmann's Bakery. The bakery is owned by me privately. In my opinion there is no uniform or standard retail price for bread in Milwaukee. I am familiar with the Standard Weight Loaf Law in Wisconsin. When the law went into [fol. 286] effect, I suffered no financial loss in being compelled to conform to its provisions. I consider the tolerance provision of our law adequate. Milwaukee, of course, is by the Great Lakes. The humidity is high, of course, during the summer. The bakers of Milwaukee are in favor of the law. I have had no difficulty in complying with its terms. I sell all my bread retail. I sell my pound and a half loaf for 13¢. I scale the dough the same the year around. I consider bread stale when 48 hours old. I would not consider bread still fresh when it has been exposed for 72 hours in a room in hot dry summer weather. I would not consider it salable as fresh bread. The principal benefit I have enjoyed is the fact that everybody must bake the same size loaf. I consider the tolerance provision adequate.

IVY L. MILLER, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live at 340 Downey Avenue, Indianapolis, Indiana. I am a chemist by training. I am now State Food and Drug Commissioner for the State of Indiana. I have served continuously in this capacity since the first of November, 1918. We have in this State a Standard Weight Bread Law, which is known as the Indiana Bakery Law.

The enforcement officer in this State has never made any ruling affecting tolerance, and has not taken advantage of [fol. 287] the discretion allowed him. We have simply enforced the law using the tolerance set out in the law. We have eight inspectors in my department for the enforcement of bread weights. They all work under my direction. As Commissioner of Foods, I am also State Commissioner of Weights and Measures. Five of my men work as Food and Drug inspectors and three as Weights and Measures Inspectors. All assist in the enforcement of the bread law. This law was passed in 1919, and has been in effect ever since. We have had little difficulty in the enforcement of this law. We have the co-operation of the baking industry. There is considerable bread shipped into the State from Illinois, Ohio and Kentucky. These bakers must comply with our regulations. Bread shipped by these bakers is weighed while in the hands of retailers or in the possession of the delivery man. Most of the bread shipped into the State is wrapped bread. These bakers have complied with our law. We have had a wide variation in humidity and weather conditions in this State. Throughout the summer and fall months, it is hot and dry. From my experience with the operation of the law, I would say that the tolerance provision is entirely adequate under all conditions as they exist in Indiana.

"Assuming, Mr. Miller that bread were shipped into the State—we will say from some distant point—under such conditions and at such a distance that 72 hours would elapse before the bread was actually sold—do you think, under such conditions, that the tolerance provision in your law [fol. 288] would still be adequate?

A. Well, the conditions set up in that question are so unusual, and are so seldom found in practice in our State, that the difficulty of answering is considerable, but in my opinion, under weather conditions as they usually prevail here, such bread would come within our tolerances.

Q. From your experience, Mr. Miller, would you say that it is possible for the baker to produce a loaf that will weigh practically what he wishes it to weigh; that it is possible for him to bake a loaf of bread that is a legal loaf in weight when baked, and still enjoy practically the maximum evaporation as permitted by the law?

A. Yes, sir."

A pound loaf of bread which had shrunk three and one-half ounces might still be edible, but it would not be salable in this State. Neither would it be palatable to most people. Such a loaf would still be wholesome, but it would not be acceptable to the average consumer.

Ivy L. Miller—Cross-examination:

I am not a practical baker. I believe that more than 90% of the bread baked in this State is wrapped. The hearth breads form the greater part of the unwrapped breads.

"You have followed, in your present position, as I understand it, Dr. Barnard.

A. Yes sir, I am his successor.

Q. And you worked with him when he was in the office, did you?

A. Yes, sir.

Q. Do you consider him an authority on bread, and its manufacture and sale?

[fol. 289] A. Yes, I consider him a very able authority.

Q. He was a chemist, was he not, by training?

A. Yes sir."

My statement that the law is a workable one is based on the fact that bakers have accepted it and on the fact that my inspectors have found the bulk of bread offered for sale complies with the law. In cases of violations, I have simply issued warnings and in some cases, but not others, I have also prosecuted. No effort has been made since the law was passed to modify that portion relating to standardization of weights.

Ivy L. Miller—Redirect examination:

Dr. Barnard is at present an Indianapolis man. Since he retired, as State Food Commissioner he has been employed largely by the baking industry. He is now a consulting food expert.

"Q. And would you say that a great deal of his time is taken by the bread and flour industries?

A. Not at the present time."

OTTO T. LAW, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live at 1845 North Harding Street, Indianapolis, Indiana. I am a State Food and Drug Inspector for the State of Indiana. I work under the food commissioner, Ivy L. Miller. Part of my duty is to enforce the Standard Weight Bread law of the state. I cover what is known as [fol. 290] the northeastern part of the State. There is considerable bread shipped into that section of the State from other States. When I enter a grocery store, I first test the scales, and then I weigh bread and other articles. I have worked as an inspector for eight years in the same capacity. My experience has been that most bread conforms to the standards fixed by the law. There have been some prosecutions.

"Q. What provisions of the law do you find most commonly violated?

A. The labeling of the bread—the weight of the loaf, the baker's name and address, which our Indiana law requires, seems to be the most common violation."

From my experience, I would say that a baker who wishes to comply with the law is able to keep his weight within the tolerance provision during the selling period.

"Q. From your experience, have you an opinion as to what is a necessary tolerance allowance in order to take care of the natural shrinkage of bread through evaporation?

A. Well now, the way you put that question I could not answer that direct—that all depends, of course, on the time that you expected to elapse between the baking and storing of the bread and the time it is supposed to be sold. As I understand it, some bakers will bake a loaf of bread and it does not get on the market for 48 hours after it is actually baked, and of course, there would be considerable more shrinkage in that time than it would be in 12 hours."

[fol. 291] I have tested bread which showed from the label that it had been baked 48 hours. Generally speaking, I found this bread complied with the law. We have always had fine cooperation from the bakers in the enforcement of the law.

Otto Law—Recross-examination:

I am not a practical baker, and know nothing of the technicalities of bread baking. Most of the bread which we inspected is wrapped bread. A small percentage is unwrapped. The unwrapped bread is whole wheat, Vienna or rye though most of the whole wheat bread is now wrapped. The unwrapped bread is commonly sold directly to the consumer by the baker.

"Q. When you are on your inspection trips among the bread dealers, you have no means of knowing, have you, how old the bread is which you examine?

A. No, we do not go into detail in regard to this—only know what the driver tells us. Sometimes I ask him when the bread was baked and he will say yesterday afternoon, or last night, or something like that. I would say that a good part of the white bread, wrapped bread is delivered to the consumer in Indiana within 8 to 10 hours after baking, that is, to the retailer's place of business, and the consumer probably would not get it until say ten hours have elapsed. The demand of the consuming public is for fresh bread. A wrapper on bread has a tendency to exclude the air so as to [fol. 292] assist in retaining its freshness. I believe that a wrapper would not cause bread to become soggy unless the wrapper was put on while the bread was still hot. Dry bread will mould. Dry bread, if put into a damp atmosphere, will absorb some moisture.

"Q. Mr. Law, perfectly dry bread will, if put in a damp atmosphere, absorb the moisture, will it not?

A. Yes sir.

Q. In a dry atmosphere it will give off moisture very quickly and easily, is that not so?

A. Well, I would not be able to answer that; it is a technical question, and I have made no experiments to determine how quickly it will take on or throw off its moisture."

Frank Trentman, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live in Cincinnati, Ohio. I am engaged in the baking business. I am the president of the Star Union Baking Company, which has a plant in Cincinnati. Our plant puts out about 28 or 38,000 pounds of bread every day. I was in business for myself for 15 years, and have been with this company for the past 20 years. I also worked as a baker before going into the business. We have both a City Ordinance and a State Law requiring us to bake a standard weight loaf. Our ordinance was passed after the war. The price of bread before the war was considerably lower than [fol. 293] now, when help and ingredients were also lower. There was standardization of bread during the war, under Mr. Hoover, who was then Food Administrator. Our Ohio law was passed in 1920, I believe. Under our law we cannot make a unit less than one pound. We are allowed a tolerance of two ounces, one ounce above and one below the 16 ounce standard. Our law is enforced by the State Food Commission or the Dairy Food Commission, which is a part of the Department of Agriculture. I was doing business in Cincinnati when the law went into effect.

"Q. Will you state whether or not your company sustained any loss by reason of the fact that you had to conform to the provisions of the law?

A. Well, that is rather hard to answer, because we haven't got anything to calculate on, but I don't think we have."

I am positively in favor of the law. I favor it for several reasons. The main one is that we gain or hold the confidence of the consumer. I favor it for economic reasons, as we do not have to change pans or change the size of the loaf. It puts competition on a fair basis. Our baker puts out a pound and one and one-half pound loaf. We bake white bread and rye bread. We use the best of flour, sugar, lard, malt and milk, we do not approve of this "Badex." We use a divider in our plant. Saturday is our holiday. If we have orders on Saturday or Sunday, we fill those with fresh bread, as we bake fresh bread every day. For orders [fol. 294] received on Sunday, we use bread baked on Saturday night.

We scale our white bread at 18 ounces. It comes out of the ovens at 16½ ounces. We use practically this same

scaling weight throughout the year. We have considerable variation in heat and moisture in Cincinnati. We have hot and dry weather at times. We wrap a small percentage of our bread. We do not ship by express, but we deliver to the local grocery stores. The grocer keeps his bread in a closed case because he is compelled to do so. Our bread is kept for sale for about 24 hours after baking. If sold after that, it is sold at a reduced price. Our bread is sometimes checked by a State official. We have had no difficulty in keeping our bread to the standard required by the State law.

If the bread is kept where there is scarcely any circulation, it will not dry out much, but if there is circulation, it will dry out very fast. Artificial heat dries it out. I cannot see that there is much difference in the amount it dries out in summer and winter. Assuming our bread was exposed in the hot dry summer months for a period of 60 to 72 hours, and assuming that it were to lose 3½ ounces of its weight during that time, I would say that it would no longer be edible or salable. It is edible, it is not spoiled, but I would not try to sell it, for it would hurt my business. Bread that is dried out is not spoiled.

[fol. 295] So far as I know, the public approves the Standard Weight Loaf. The majority of bakers in Cincinnati are in favor of it. This is true of the organized bakers. I consider the tolerance provision in our law adequate. If that tolerance were increased to 3½ ounces in the 16 ounce loaf, I would not favor the law, because "we would not have any more standard weight; that is the way I look at it:

"Q. Will you explain that answer a little?

A. Well, it would leave too much room for—I would say —unfair competition. The man that would not be fair could take advantage of it either way."

Frank Trentman—Cross-examination:

The millers advise us that the patent flours are considered the best as to moisture content. I do not know much about the amount of moisture in flour, as the millers give us that data. Our bread is delivered to the dealers within six or eight hours from the time it is baked. For the day's delivery, we finish usually about 7:30 in the morning. Sel-

dom do we hold bread six or seven hours before it is delivered. We do not deliver bread at night excepting to restaurants. Moisture is essential to breadmaking, but does not add to the solid content. Bread from which the moisture has been evaporated has the same food value, but would not be palatable. People prefer fresh bread partly [fol. 296] because it is more palatable and partly because it has a better flavor. It is not the moisture alone which makes it palatable, as toast from which most of the moisture is driven is still palatable. Fresh bread makes the best toast. In dry weather moisture is evaporated fast, but that is not the only reason why our law requires dealers to use the closed cases. They are intended also as a sanitary measure. That is a city ordinance, and it is enforced by the health department.

DANIEL KERNAN, a witness in behalf of the defendants, testified as follows:

Direct examination:

My name is Daniel Kernan, and my bakery is at 3719 Glenway Avenue, Cincinnati, Ohio. We operate under the name of Kernan Sons. The business is a partnership, and I am one of the partners. My brother and I have been in the baking business 21 years. My father was in the business in 1875, and we succeeded him. We have a Standard Weight Loaf Law here in Ohio. We have also a city ordinance, but they are practically alike. The ordinance was passed about ten years ago, immediately after the Federal Government restriction was taken off. The State law was passed in 1921 or 1922. I believe that the state law provides for a tolerance of a half ounce to the pound loaf, that to be allowed by weighing 25 loaves. I consider a half [fol. 297] ounce tolerance to the pound loaf adequate, when the average of 25 loaves is taken. We have a local bakers association called the Merchant Bakers Group. I am president of the group. I have been operating in Ohio under the Standard Weight Loaf Law since 1921. I am in favor of the law. I find it possible to carry on my business under the provisions of the law without financial loss. I favor the law principally because the consumer gets what he pays for, and he knows what he is getting, the same as when he

buys sugar or any other commodity. The law tends to stabilize prices for the benefit of the trade in general. Bakers of Cincinnati are very favorable toward the law. This is true of the bakers throughout the State. Changes in the law have been discussed at State conventions, but those favoring the law have always won in votes taken, by a good majority. I believe that the law tends to improve the quality of bread. It is easier for the baker to ascertain his cost and to adopt a reasonable selling price based on a reasonable profit. If a loaf of bread is puffed by the use of a bread brake or otherwise, the quality is decreased. Without a Standard Weight Law, a baker can puff a loaf of bread and make it look as large as one that is not puffed, and it will weigh less.

[fol. 298] Our output is about 4500 loaves a day. We wrap about 60% of our output. We do not ship outside the City of Cincinnati. We deliver our bread to groceries and to retail trucks which deliver from house to house. We wrap our pan bread and leave our hearth bread unwrapped. Hearth bread is Vienna, rye, Irish bread and twist bread. Evaporation is slightly greater in the hearth breads. We do not use as much sugar and milk in the hearth bread as we do in the pan bread. Bread which is in contact with the hearth while being baked evaporates slightly more than the others, and we scale a little heavier to take care of this. We scale our dough at 18½ ounces for hearth bread, and eighteen ounces for pan bread. The bread when scaled at those weights weighs slightly over a pound when baked. When baked as described, we have little difficulty in keeping a loaf a legal loaf. I understand that none of the manufacturers will guarantee less than a half ounce variance on the dough divider. We do not find the variation that great. We have a man at the divider who watches and regulates the weights. He weighs about every tenth loaf. We find ordinarily that when we start dividing the dough, the weights are irregular, so we throw back the first loaves. After that, regulation of weights is almost automatic. From my experience, I find that I can bake a loaf weighing practically what I desire it to weigh, that the variance is likely to be less than a half ounce. There is very little need for a tolerance when weigh-
[fol. 299] ing 25 loaves, as there is very little variation in each loaf. If I wish to bake a loaf weighing 16¼ ounces,

I can come within a quarter ounce of that weight for the baked loaf.

Bread exposed for sale in Cincinnati is usually kept in bread cases. Unwrapped bread is always kept in such cases, as it is required by city ordinances. Evaporation in these cases is not great. I do not think bread will evaporate more in winter weather than in summer if kept in these glass cases. If left outside, it would evaporate slightly more. We have great variation of humidity in Cincinnati. However, we have not found it necessary to vary our scaling weight with variations in the weather. When the weather is warm and sultry, we use slightly more flour and make the dough a little stiffer. We do not have all the modern facilities of regulating temperature that they do in the large shops. We use the best quality of ingredients obtainable. We do not use Badex. We do use Aready, which is a yeast food. This has no effect on evaporation.

"Q. In baking a high quality loaf using good flour, milk, lard, and other things that make up a good loaf, is the evaporation greater or less than when water and cheaper ingredients are used?

A. I do not think there is any difference, if anything, in using those materials. I would say there is less evaporation, that is the reason, I think, we have to scale off our [fol. 300] hearth bread more is that milk and more lard or compound which we use rather retains the moisture in a loaf more, and I think that holds in the baking of the loaf as well as it does in the keeping of the loaf afterward."

People like fresh bread. I would say that bread two days old is still salable provided that it is wrapped bread. People do not care to buy unwrapped bread after the second day. Competition here is about the same as in every other city. Bread three days old would be salable, but is it seldom allowed to lie that long, as the drivers put the old bread in front where it will be sold first. Assuming that bread were permitted to get 60 or 72 hours old in hot, and dry weather "it would be salable, but of course, it is up to the person that buys it." I seldom eat bread myself which is more than 48 hours old. This refers to wrapped bread. I do not think that it is possible for a pound loaf of bread to lose as much as 3½ ounces under the most adverse condi-

tions. I do not believe that a wrapped loaf of bread would lose over one ounce in 72 hours. I am in favor of the Standard Weight Loaf Law as it operates in Ohio. The attitude of bakers in this city is very favorable to the law.

Daniel Kernan—Cross-examination:

We bake every day. We deliver about three hours after baking. We make our wrapped bread first because it keeps [fol. 301] longer, and then we make the hearth bread. As it comes out of the ovens, we pack it for the shippers. Our wrapped bread is mostly the ordinary white bread, which constitutes about 60% of output. The Jewish bakers make a specialty of hearth bread. All bakers make rye bread, which is a hearth bread. The reason why many of the small bakers cater to customers of hearth bread is because they are old timers and are not up to the times in offering their pan bread. I know that a loaf of bread is composed of the solids, or food stuffs and moisture. I suppose that in a long enough time the moisture might evaporate. Bread is porous and it is the moisture which makes it palatable although a dry loaf may still be edible. I am not saying that it is good when dry, as the proper flavor of a loaf depends upon its freshness. I would say the best flavor is when bread is bought 12 hours old. It is difficult to figure the amount of moisture in the dough, as we use dry milk or condensed milk. A great deal depends upon the moisture in the ingredients. Those containing the greatest moisture will give a dough with the greatest moisture. However, when using dry ingredients we add liquids to make up for the lack of moisture in the ingredients. When using dry milk, we use more water than when using condensed milk.

[fol. 302] Daniel Kernan—Redirect examination:

I would not be in favor of a law which provides for a 3½ ounce tolerance on the pound loaf, because the tolerance would be too great. It would not be a Standard Weight Loaf law if the pound loaf did not weigh a pound. Even though the time for weighing was greater than 12 hours, I would not consider so great a tolerance necessary. Even though the weighing period extended over 72 hours, I would say that the tolerance would be too great. It is my opinion that for a 72 hour period, a tolerance of one

and one-half ounces, especially in wrapped bread, would be sufficient. For unwrapped bread, it should perhaps be one and three-quarters ounces. I do not know of any bakers during the last five years who ship upwrapped bread. I do not know of any bread that is shipped into Cincinnati. Bread consumed here is made locally.

E. L. UFFELMANN, a witness in behalf of the defendants, testified as follows:

Direct examination:

My name is E. L. Uffelmann. I live at 3424 Glenmore Avenue, Cheviot. I am president of the Uffelmann Baking Company, which is an Ohio Corporation. We have a plant in Cincinnati. I have been in the baking business for 13 or 14 years in Cincinnati. We bake from five to six [fol. 303] thousand loaves of bread a day. I have been operating under the Ohio Standard Weight Loaf law since it was passed in 1921, or thereabouts. Our law is enforced by the State Weights and Measures Bureau of the Department of Agriculture. We also have a city ordinance to the same effect. I think the provisions of the ordinance and the law are nearly alike. Off hand I cannot point out many differences. The size of the loaves required by both are the same, and the tolerance provisions are the same. I do not recall the circumstances under which our law was passed, but evidently there was a demand for such a law or it would not have been passed. In Cincinnati, I do not know of any baker who is not in favor of the law. I do not know much about the attitude of bakers outside of Cincinnati although I have read that some bakers who have competitors in neighboring States feel that they are being imposed upon by outside bakers. I am in favor of the law because I think it is conducive to a good sound practice. I believe the consuming public has confidence in the industry; that the housewife feels that she is getting her money's worth when she buys a pound loaf of bread. I believe that the law acts as a stabilizer with reference to competition. Without a Standard Weight Loaf Law, bakers would sell loaves of different weights and different

sizes. I feel confident in saying that when we began operating under the Standard Weight Law, we sustained no [fol. 304] financial loss, on the other hand, I believe we enjoyed certain savings in connection with pans and wrappers. If there were no standard weights we would have to buy different size pans more often than we do now, as when a competitor baked a different size loaf we would have to change the size of our loaf and buy new pans. We bake one pound, pound and a half, two and three pound loaves. We do not ship any of our bread, but sell it in the local territory.

We scale our dough at 18 ounces. It weighs a pound when baked. We scale our Vienna and corn meal breads at 18½ ounces. In my opinion, we are able to bake a loaf of bread which weighs what we expect it to weigh. We have had no trouble in baking bread and keeping it within the tolerance provision, and consequently a legal loaf. I consider one ounce tolerance to the pound loaf adequate. I think it is adequate for all seasons of the year and under all weather conditions which we have in Cincinnati. Bread tends to dry out in a store artificially heated and also in the summer during hot dry weather. I do not think the amount of evaporation is much different in summer and winter. Grocers keep their unwrapped bread in cases, but wrapped bread they keep on shelves and on counters and in boxes on the floor. We wrap our pan bread, but do not wrap the hearth breads. About 80 per cent of our bread is pan bread. Under most adverse weather conditions that we have in Cincinnati, I believe [fol. 305] the amount of evaporation is not greater than half an ounce per pound. I would say that an ounce or perhaps two ounces would be sufficient for a 48 hour period. Our bread is all sold within 12 hours after it is baked. In my opinion, a loaf of bread which had been exposed for 72 hours to the heat and wind in hot dry summer weather might be edible, but not salable. Competition here is keen, and it would require you to sell your bread much sooner than 72 hours. If the wrapper of a loaf of bread were taken off and it were exposed in the sun in hot dry weather for a sufficient period of time and it lost as much as 3½ ounces, it might be possible to eat it, but I would not consider it palatable or salable unless all other baking plants were out of condition. Our com-

pany has always favored the Ohio Standard Weight Law. I consider that a tolerance of one ounce to the pound is sufficient. We have had no difficulty in operating under that law and keeping within the one pound tolerance provision. I think that a tolerance provision of three and one-half ounces to the pound would be impractical. I would consider even though the loaf might be weighed when 72 hours old, the tolerance would be adequate. The majority of bread which is shipped is wrapped bread.

E. L. Uffelmann—Cross-examination:

We deliver all our bread to dealers in Cincinnati. We [fol. 306] deliver it within six or seven hours after baking. Our pan bread is white bread and most of it is wrapped today. All of our pan bread is wrapped in our bakery.

"Q. And when you spoke of protecting the public, you had in mind, as I understood your explanation, the fact that under this law the dealer cannot give the consumer a 14 ounce loaf when it should be a 16 ounce loaf?

A. Yes, we feel that if the housewife knows that a loaf of bread will weigh a pound when she sends to the grocery store or to the dealer for a loaf of bread, she feels quite confident that her little girl—whoever she sends—is going to come back with 16 ounces of bread." "That is why we favor the law, I presume the same thing applies to the bakers in general more or less."

The food value of bread is contained in the solid content. Bakers are not agreed as to the amount of moisture bread should contain in order to make the best bread. All of the moisture could be evaporated from a loaf of bread and the food content would still be present. One of the objects of wrapping bread is to keep in the moisture and make the bread more palatable.

E. L. Uffelmann—Redirect examination:

The amount of evaporation in bread after baking would depend somewhat on the amount of evaporation during [fol. 307] the baking process. There is less moisture in hearth bread when it is first baked. For hearth bread, bakers usually use a little stiffer dough than that for pan breads. During the cooling period, I think there would be

little difference in the amount of evaporation in the hearth and pan breads. I believe that the increased confidence of the public has been beneficial to the bakers.

"Q. You spoke about the confidence of the housewife in getting a pound loaf of bread. Do you feel that that confidence has been any benefit to the bakers of Cincinnati?

A. I feel that it has, yes.

Q. Do you believe that that confidence has been of any financial value, particularly in the greater sale of your products?

A. I think that it has."

E. L. Uffelmann—Recross-examination:

"Q. The stiffer dough is the dough with the least moisture?

A. Yes, however, of course, that is a matter of policy in different bakeries. Every baker has his own ideas on those things. I would say incidentally in the standard weight law that it would be a better policy to make your law read to do the scaling and weighing in the bakery within twelve hours after the bread is baked."

E. L. Uffelmann—Redirect examination:

If the tolerance provision in our law were increased to [fol. 308] 3½ ounces, I would not favor the law, because we would have lost the purpose of the Standard Weight Law. If you allow a tolerance of 3½ ounces your under-tolerance on your pound and a half loaf would be very close to your over-tolerance on your pound loaf. Consequently, you no longer have a standard weight law to protect against the unscrupulous baker.

E. L. Uffelmann—Recross examination:

If the criminal law, or the law of any given state requires 16 ounces of bread to be sold to a pound, and 24 ounces to be sold to a pound and a half loaf, I don't think that would take care of that situation. I don't think any one violating it would be subject to the criminal law because if I sold you a loaf of bread and you weighed it and it weighed 19½ ounces, or if it weighed 20 ounces, it would be so close, I could say if I want to—I could sell it to you for a pound and a half and say it was a mistake, it was

an under weight one and one-half pound loaf, it had dried out from a one and one-half pound loaf. That is the point I am trying to make. If the law required a 1½ pound loaf to be 28 ounces, you would be liable under that law if you sold a loaf weighing only twenty ounces, but if you allowed [fol. 309] 3½ ounces of tolerance there you can see how it is going to wreck your standard weight law. I have in mind the 3½ ounces, either under or over. "Then you would not have a standard weight."

JAMES NELSON TRACY, a witness in behalf of the defendants, testified as follows:

Direct examination:

My name is James Nelson Tracy. I live in Springfield, Ohio, at 135 West Pleasant Street. I am food inspector of the State Department of Agriculture. I have charge of inspecting the bakeries of this state. I operate under the Dairy and Food Division of the State Board of Agriculture. O. J. Bailey is chief of the Division. There are the two divisions of Agriculture, Foods and Dairies. I have been an inspector for 14 years in the State of Ohio. Most of my time is devoted to the inspection of bread and bakeries. I cover most of the state, mainly in investigating complaints. The weighing of the bread comes particularly within my duties. We have a standard weight bread law in this state, which is enforced by the Dairy and Food Division of our Department. Complaints sometimes come through the county sealers, at times through the inspectors in the field, sometimes through the city dealers. I was in the baking industry myself for many years. I started to work in the industry when sixteen years of age. [fol. 310] I continued in it until I was about 30, and then went into business for myself. Most of my business experience has been with the wholesale baking business.

Our State Bread Law went into effect in September, 1921. The tolerance provision of our law allows the variations of one ounce on the single loaf and a half ounce per pound on the average of 25 loaves. From my experience, I would say that our law is enforceable. I would say that it is reasonably possible for a baker to comply with its

terms and provisions. We have very little trouble with bakers who are familiar with the baking business. We have enjoyed the cooperation of the baking industry in this State in the enforcement of the law. If bread is properly baked, is thoroughly cooled and wrapped, and is properly handled, I do not believe that climatic conditions make much difference in the amount of evaporation. When we find bread, we know who the manufacturer is and we have the weight on the loaf either on the wrapper or by pan impression, or by label. Most bread that is shipped is wrapped bread. I do not know of any baker who ships unwrapped bread. A few hearth loaves do come into the State unwrapped. Whether it is possible for a baker to bake a loaf of bread that weighs practically what he expects it to weigh depends solely on the condition of the plant perhaps; you see there is so much difference [fol. 311] in plants, and especially in their baking, and some ovens, you know, will bake a little slower than others and the humidity would not be just the same in their dough rooms perhaps, and sometimes in the proofing of the bread they overproof it, and that has a tendency to lose some of the moisture. If some of the extra moisture is lost in overproofing, or in some such manner as described, I would not say the weight would be quite so great immediately after it left the oven.

James Nelson Tracy—Cross-examination:

As an enforcement officer, I am interested in seeing that the consuming public gets 16 ounces of bread to a pound loaf.

"Q. If the consumer is given a little more than he is paying for, that does not interest the enforcement officer, does it?

A. There is the question right there that enters into against your standard weight. You see, we have a standard weight 16 ounces or 24 ounces.

Q. I understand, but take the question as I have put it, if the dealer gives the consumer 17 ounces for a pound loaf of bread, and the consumer only pays for the 16 ounces being a pound loaf, there is no injury done, is there?

A. There is no injury only in this way. They sometimes use this one ounce for advertising purposes.

Q. Suppose they do?

A. Then you are getting away from your standard weight; when they get away from their tolerance we call [fol. 312] them, just one ounce if they are over or one ounce under on one single loaf."

I will cite you an example: We had a case where the baker was using a 16 ounce label on a 20 ounce loaf. He was making the public believe that he was giving them over-weight bread. When I purchased a loaf of this bread, I paid as much for the 20 ounce loaf as I paid for a 24 ounce loaf. Yet they are trying to make the public believe that they are giving them overweight bread. He was pretending to the public that he was charging them for a sixteen ounce loaf and giving them four ounces of bread. Twelve cents was the price for the 1½ pound loaf and this dealer was charging them 12¢ and only giving them 20 ounces of bread. He was not violating the law in pretending to give 24 ounces of bread, charging them for 24 ounces of bread and only giving them 20 ounces; he was not pretending to give them 24 ounces of bread; he was pretending to sell them 16 ounces as the loaf was labeled. That is the point we are trying to get at as you ask me about the over-weight bread. We do not establish these laws; our laws say one pound, 1½ pounds, and multiples of pounds. There is no standard weight for a 20 ounce loaf. If you ask a dealer for a pound loaf of bread he does not have to give you 16 ounces, he must give you a little better than 15½, with the tolerance. The pound is 16 ounces, so he gives 16 ounces or whatever under the law allows, and if he only gives 12 [fol. 313] ounces he is violating the law. If he gives 17 ounces of bread you are not injured, he is not injured, and the public is not injured. If he gives you 20 ounces of bread when you are purchasing and paying for a pound loaf, you are not injured, but you are getting a way over your standard weight. You pay for 16 ounces and get a 20 ounce loaf, but you have not a standard weight. I would say the consumer is not getting the worst of it.

"Q. Is the dealer injured in any way, shape or manner, if he hands me 20 ounces of bread, being the loaf that he has there, and I only pay him for 16 ounces of bread?

A. Well, that would be a question I would not like to answer."

I would not answer that. The point is simply to protect the public from getting less than they suppose they are paying for. In other words, I want the public to get at least 16 ounces when they buy a pound loaf and at least 24 ounces when they are getting a 1½ pound loaf.

"Q. Therefore where is the injury if more than the 16 ounces to the pound or more than 24 ounces to a 1½ pound are given to the consumer?

A. That would all depend upon the dealer, if they take advantage of that, we do not have a standard. They would not be permitted, to start with, to make a 20 ounce loaf." "Now understand, we are not here on behalf of any amount of tolerance, we do not care about that; all we are for is what the bread weighs after it is baked; that is the only thing we are here for." It must weigh at least the minimum.

"Q. That is the point you have in mind?

[fol. 314] A. We have a tolerance both over and under.

Q. Isn't that the point, it must be the minimum?

A. I am only enforcing the law as it is gotten up. If it is unjust, that is on them. As long as it is on the Statutes, we are going to enforce it as it reads.

Q. You cannot find any objection, can you, to giving the consumer more than he pays for?

A. I have nothing to do with that.

Q. I am asking you as an enforcement officer.

A. I have nothing to do with that, the only thing we have to do is to go according to what your law says, whether we think it is right or whether we think it is wrong.

Q. Now then, if conditions are such that I, as a baker, must have a standard weight loaf when it is baked, in order to have it always the minimum weight when it reaches the consumer, you as an enforcement officer are not interested in the size of the loaf when it is baked, so long as the customer is not gypped when he purchases the loaf?

A. We have nothing to do with the customer, the only thing we are here in behalf of is whether it is up to the tolerance either over or under, that is as far as we can go, and as far as my opinion is concerned, it would not affect the law in any way, it would not have any effect on the law, as long as the law is on the statutes and specifically says one pound, one ounce over or under, you cannot vary

away from that. I might say yes, it is all wrong or all right, that would not make it right."

[fol. 315] I do not believe there is a baker in the city of Cincinnati who must scale his dough on the average of 19½ ounces in order to maintain a 16 ounce loaf. We go by the charts furnished by the Bureau of Standards in Washington. From my experience, I would say that 27 ounces of dough will produce a legal 24 ounce loaf, and 18 ounces of dough will produce a legal 16 ounce loaf, excepting that in the hearth bread, the dough should be scaled a little heavier.

GEORGE MEINERS, a witness in behalf of the defendants, testified as follows:

Direct examination:

I live in Hamilton County, Ohio. I am secretary of the Kroger Grocery and Packing Company, which is an Ohio corporation. My company does business in the States of Ohio, Kentucky, Indiana, Illinois, Missouri, Michigan, Wisconsin, Arkansas and Oklahoma. My company is engaged in the business of selling groceries, meats and bakery products. We make the products which we sell. We sell only to our own retail stores. We have twelve bakeries. We have bakers in Cincinnati, Dayton, Columbus, Toledo, Detroit, Grand Rapids, Minneapolis, Indianapolis, St. Louis, Madison, Wisconsin and in two other cities. In distant points, like Oklahoma, we buy some bread from other bakeries, but it amounts to less than 2% of our entire sales. We ship [fol. 316] bread, for instance, from Cincinnati to Charleston, West Virginia, and the territory around Charleston for a distance of about 200 miles. We ship wrapped bread. I do not believe that we sell any unwrapped bread. It is our practice to wrap all our bread.

Quite a few of the states in which we operate have Standard Weight Bread laws. We have had no trouble in keeping within the standard weight provisions of the Ohio law. We have had no difficulty in obeying the Wisconsin standard weight law, nor have we had trouble in complying with the provision of the Standard Weight laws of the other states in which we operate. My company welcomes a standard

weight bread law. We consider it an advantage on a competitive basis. Where there is a standard weight law, we are on a par with other bakeries and it leaves it open to us to compete with them on the matters of price and quality. We produce a standard loaf of bread as a matter of business policy in all the States in which we operate, regardless of whether there is a standard weight law or not. When standard weight laws were passed in the different states where we operate, in some instances, it may have been necessary to purchase new pans, but when once purchased, there was no new expense. I believe the bakers of this State are very favorable to the Ohio Standard Weight law. I consider that the tolerances allowed in this state are adequate. We have no trouble. Some of our bread is sold 20 hours after it is baked. I mean it reaches [fol. 317] its destination 20 hours after it is baked. I would say that in this country bread which is 60 or 72 hours old could not be sold as fresh bread. It could be sold then only as stale bread. Bread of that kind we generally sell for feed. In supplying retailers with bread to be used on Monday, it is not necessary for us to use old bread. Our bakers go to work at four o'clock in the afternoon, and we ship our bread during the night by express. We close down on Saturday afternoon and Sunday mornings and go to work on Sunday afternoon again. We bake during the night and in the morning. For Monday morning's sales, we would not be likely to ship Friday baked bread. If bread were exposed to very severe conditions of heat and humidity so that it were permitted to dry out as much as 3½ ounces to the pound loaf, this company would consider it stale bread.

[fol. 318]

DEFENDANTS' EXHIBIT No. 30

Goodey Vienna (Unwrapped)

Loaf N6.	Weight ounces when rec'd	6 hours	12	24	36	48	72	120	Loss from time received: 6 hours	12	24	36	48	72	120	
1	15½	15⅜	15¼	14⅞	14⅝	14¼	13¾	13⅛	⅛	⅛	⅝	⅞	1⅞	1⅝	2⅜	
2	19	18¾	18½	18¼	17⅞	17½	17	16½	¼	⅛	¾	1⅛	1½	2	2½	Moisture—33.3%
3	19	18⅞	18¾	18⅜	17⅞	17½	17	16⅜	..	..	..	..	..	..	..	
4	18¾	18½	18¼	18	17½	17¼	16⅝	16⅛	..	..	..	..	..	..	..	
5	15½	15¼	15⅛	14¾	14½	14¼	13¾	13¼	..	..	..	..	..	..	..	
6	19	18⅝	18½	18⅛	17⅝	17¼	16¾	16⅛	..	..	..	..	..	..	..	
7	19	18¾	18½	18⅛	17¾	17⅝	16⅞	16¼	..	..	..	..	..	..	..	
8	18¾	18⅜	18⅛	17¾	17¼	17	16½	15⅞	..	..	..	..	..	..	..	
9	19⅛	18¾	18½	18⅛	17¾	17⅜	16⅞	16¼	..	..	..	..	..	..	..	
10	19⅛	18¾	18½	18⅛	17⅝	17¼	16¾	16	..	..	..	..	..	..	..	
11	19	18⅝	18¼	17⅞	17⅜	17	16½	15⅞	⅜	¾	1⅛	1⅝	2	2½	3⅛	
12	19	18½	18¼	17¾	17¼	16⅞	16¼	15½	½	¾	1¼	1¾	2⅛	2¾	3½	
Humidity	35%	35	33	28	20	21	28	37	..	..	..	..	..	..	..	
Temperature	72° F.	75	75	74	74	77	75	73	..	..	..	..	..	..	..	

[fol. 319]

DEFENDANTS' EXHIBIT No. 31

	Goodey Pullman Wrapped								Loss from time received						
Loaf No.	When rec'd	6 hours	12	24	36	48	72	120	6 hours	12	24	36	48	72	120
1	15 1/2	15 1/2	15 1/2	15 1/2	15 3/8	15 3/8	15 1/4	15 1/8	0	0	0	1/8	1/8	1/4	3/8
2	15 1/2	15 3/8	15 3/8	15 3/8	15 1/4	15 1/4	15 1/8	15	1/8	1/8	1/8	1/4	1/4	3/8	1/2
3	15 3/8	15 3/8	15 3/8	15 1/4	15 1/4	15 1/8	15 1/8	14 7/8	0	0	1/8	1/8	1/4	1/4	1/2
4	15 3/8	15 3/8	15 3/8	15 1/2	15 1/2	15 1/2	15 3/8	15 1/8	0	0	1/8	1/8	1/8	1/4	1/2
5	15 1/4	15 1/4	15 1/4	15 3/4	15 3/8	15 3/8	15 1/2	15 1/4	0	0	0	1/8	1/8	1/4	1/2
6	15 3/8	15 3/8	15 3/8	15 3/8	15 1/4	15 1/4	15 1/8	15 7/8	..	..	....	....	....	....	....
7	15 1/4	15 3/8	15 3/8	15 3/8	15 1/2	15 1/2	15 1/4	15 1/8	..	..	....	....	....	....	....
8	15 3/8	15 3/8	15 3/8	15 1/2	15 1/2	15 1/2	15 3/8	15 1/8	..	..	....	....	....	....	....
9	15 1/4	15 1/8	15 1/8	15 1/8	15	15	14 7/8	14 5/8	..	..	....	....	....	....	....
10	15 3/8	15 1/2	15 1/2	15 1/2	15 3/8	15 3/8	15 1/4	15	..	..	....	....	....	....	....
11	15 1/4	15 1/4	15 1/8	15 1/8	15 1/8	15	14 7/8	14 3/4	0	1/8	1/8	1/8	1/4	3/8	1/2
12	15 3/8	15 3/8	15 1/4	15 1/4	15 1/4	15 1/8	15	14 3/4	0	1/8	1/8	1/8	1/4	3/8	3/8

Moisture—31.2%

[fol. 320]

DEFENDANTS' EXHIBIT No. 32

Gooch Vienna (Unwrapped)

Loaf No.	When rec'd.	6 hours	12 hours	24	30	48	72	120
1	217/8	215/8	215/8	211/8	205/8	201/4	195/8	187/8
2	215/8	215/8	211/8	203/4	201/4	197/8	195/8	185/8
3	207/8	205/8	205/8	201/8	191/2	191/8	185/8	177/8
4	213/4	215/8	211/8	205/8	201/8	195/4	191/8	185/8
5	215/8	211/4	207/8	205/8	201/8	195/8	191/8	185/8
6	215/8	211/8	207/8	201/4	195/4	195/8	185/4	18
7	213/4	211/2	211/8	205/8	201/8	195/8	19	181/4
8	211/2	211/8	203/4	201/4	195/4	195/8	183/4	183/8
9	215/8	207/8	201/2	20	195/8	191/8	181/2	173/4
10	213/4	213/8	21	205/8	197/8	191/2	187/8	18
11	21	205/8	205/8	195/4	191/4	187/8	181/4	171/2
12	21	201/2	201/8	195/8	19	185/8	18	171/8

[fol. 321]

DEFENDANTS' EXHIBIT No. 33

Gooch Wrapped

Loaf No.	When rec'd.	6 hours	12	24	30	48	72	120
1	151/2	151/2	151/2	151/2	153/8	151/4	151/8	147/8
2	141/4	141/8	141/8	141/8	14	14	137/8	135/4
3	143/8	143/8	143/8	141/4	141/8	141/8	137/8	135/4
4	15	15	15	147/8	147/8	143/4	141/2	143/8
5	153/8	153/8	153/8	151/4	151/8	151/8	15	143/4
6	151/4	151/4	151/4	151/2	15	15	147/8	143/8
7	151/4	151/4	151/8	151/8	15	147/8	143/4	141/2
8	151/8	151/8	151/8	15	15	147/8	143/4	145/8
9	151/4	151/4	151/8	151/8	15	15	147/8	143/4
10	141/4	141/4	141/8	141/8	14	137/8	137/8	135/8
11	151/2	151/2	151/2	153/8	151/4	151/4	15	147/8
12	141/4	141/8	141/8	141/8	14	14	133/4	131/2

[fol. 322]

DEFENDANTS' EXHIBIT No. 34

Bread

April 9, 1929

5 P.M.	Humidity 30%	Temperature 72° F.	
		April 10,	
9 A.M.	35%	72° F.	When received
3 P.M.	35%	75° F.	6 Hours
9 P.M.	33%	75° F.	12 Hours
		April 11,	
9 A.M.	28%	74° F.	24 Hours
3 P.M.	23%	76° F.	30 "
9 P.M.	20%	74° F.	36 "
		April 12,	
9 A.M.	21%	77° F.	48 "
		April 13,	
9 A.M.	28%	75° F.	72 "

April 14, Sunday
April 15,

9 A.M.	37%	73° F.	120 "

[fol. 323] DEFENDANTS' EXHIBIT 35

Tests Made by Edwin S. Martin of the Vienna Bakery, Fremont, Nebraska
(10 loaves were weighed in each group, and the figures below show the average of the 10 loaves' weight.)

Wrapped White Bread

Scale Weight	Baked Weight	13 hours	24 hours	49 hours	61 hours
19 oz.	16¾ oz.	16¾ oz.	16½ oz.	16½ oz.	16½ oz

Unwrapped Vienna Bread

Scale Weight	Baked Weight	13 hours	25 hours	37 hours	49 hours	61 hours
19 oz.	16¾ oz.	16 oz.	16 oz.	15½ oz.	15¼ oz.	15 oz.

DEFENDANTS' EXHIBIT No. 37

Evaporation Test April 20, 1929

O. P. Skaggs System Bakery, Omaha, Neb., H. W. Wehr, Baker.

White Wrapped Bread

Scaling weight 18 oz.

Weight out of oven—1 hr. 30 min. cooling time

	Time 1:20 AM	2:50 AM	6 hr. 8:50 AM	12 hr. 2:50 PM	Apr. 10 18 hr. 8:50 PM	Apr. 11 24 hr. 2:50 AM	Apr. 11 36 hr. 8:50 PM	Apr. 12 48 hr. 2:50 AM	Apr. 13 72 hr. 2:50 AM	Apr. 16 144 hr. 2:50 AM	Apr. 17 168 hr. 2:50 AM
	Ounces										
1	16½	16½	16½	16½	16½	16½	16½	16¼	16¼	15½	15½
2	16¾	16¾	16¾	16¾	16¾	16½	16½	16¼	16¼	15¾	15¾
3	16½	16½	16½	16½	16½	16½	16¼	16¼	16¼	15¾	15¼
4	16¾	16¾	16¾	16¾	16¾	16½	16½	16¼	16¼	15¾	15½
5	16½	16½	16½	16½	16½	16½	16¼	16¼	16¼	15¾	15½
6	16½	16½	16½	16½	16½	16½	16½	16¼	16¼	15¾	15¾
7	17	17	17	17	16¾	16¾	16¾	16½	16½	16¼	16
8	17	17	17	17	16¾	16¾	16¾	16½	16½	16¼	16¼
9	17	17	17	17	16¾	16¾	16¾	16½	16½	16¼	16
10	16½	16½	16½	16½	16¼	16¼	16¼	16¼	16	15¾	15½

Raisin Wrapped Bread, Scaling Weight 18 oz.

Wt. out of oven—1 hr. 30 min. cooling time

	2:28 AM	3:58 AM	9:58 AM 6 hr.	3:58 PM 12 hr.	9:58 PM 18 hr.	3:58 AM 24 hr.	3:58 PM 36 hr.	3:58 AM 48 hr.	3:58 AM 72 hr.	144 hr.	168 hr.
1	16½	16½	16½	16½	16½	16½	16½	16½	16½	16¼	16¼
2	16½	16½	16½	16½	16½	16½	16½	16¼	16¼	16	15¾
3	16¼	16¼	16¼	16¼	16¼	16¼	16¼	16¼	16¼	15¾	15¾
4	16¾	16¾	16¾	16¾	16¾	16¾	16¾	16¾	16¾	16¼	16¼
5	16½	16½	16½	16½	16½	16½	16½	16¼	16¼	15¾	15¾
6	16½	16½	16½	16½	16½	16½	16½	16½	16¼	15¾	15¾

7	16¾	16¼	16¼	16¼	16¼	16¼	16¼	16¼	16¼	15¾	15¾
8	16½	16½	16½	16½	16½	16½	16½	16¼	16¼	15¾	15¾
9	16½	16½	16½	16½	16½	16½	16½	16½	16¼	16¼	16¼
10	16¼	16¼	16¼	16¼	16¼	16¼	16¼	16¼	16¼	15¾	15¾

Health Wrapped Bread, Scaling Weight 18 oz.

Wt. out of oven—Cooling time 1 hr. 30 min.

	3:18 AM	4:48 AM	10:48 AM 6 hrs.	4:48 PM 12 hr.	10:48 PM 18 hr.	4:48 AM 24 hr.	4:48 PM 36 hr.	4:48 AM 48 hr.	4:48 AM 72 hr.	144 hr.	168 hr.
1	16½	16½	16½	16½	16½	16½	16½	16¼	16¼	15¾	15¾
2	16¼	16¼	16¼	16¼	16¼	16¼	16¼	16	16	15½	15½
3	16½	16½	16½	16½	16½	16½	16¼	16¼	16	15¾	15¾
4	16½	16½	16½	16½	16½	16½	16½	16¼	16¼	15½	15½
5	16¼	16¼	16¼	16¼	16¼	16¼	16¼	16	15¾	15½	15½
6	16¼	16¼	16¼	16¼	16¼	16¼	16¼	16	16	15¾	15½
7	16½	16½	16½	16½	16½	16½	16¼	16¼	16¼	15¾	15¾
8	16¾	16¾	16¾	16¾	16¾	16¾	16¾	16½	16½	15¾	15¾
9	16¼	16¼	16¼	16¼	16¼	16¼	16¼	16	16	15½	15¼
10	16¾	16¾	16¾	16¾	16¾	16¾	16½	16½	16½	15¾	15½

[fol. 325] DEFENDANTS' EXHIBIT No. 38

Sheet No. 2

Evaporation Test, April 10, 1920

O. P. Skaggs Bakery, Omaha, Nebraska. H. W. Wehr, Baker

White Bread Wrapped

	April 18 2:50 AM 192 hrs.	April 19 2:50 AM 216 hrs.	April 20 2:50 AM 240 hrs.
1	15½	15	14¾
2	15½	15½	15
3	15½	15¼	14
4	15½	14	15
5	15½	14½	15
6	15¾	15½	15½
7	15¾	15¾	15½
8	16	15¾	15½
9	15¾	15¾	15½
10	15½	15¼	15

Raisin Wrapped Bread

1	16¼	15¾	15¾
2	15¾	15½	15½
3	15½	15½	15¼
4	16¼	16	16
5	15¾	14½	15½
6	16¼	15¾	15¾
7	15¾	15½	15½
8	15¾	15½	15½
9	16	15¾	15¾
10	15¾	15½	15½

Health Wrapped Bread

1	15¾	15½	15¼
2	15½	15	14¾
3	15¼	15	15¼
4	15¾	15¼	14¾
5	15¼	15	15
6	15	14¾	14¾
7	15½	15¼	15
8	15½	15	15
9	15¼	14¾	14¾
10	15½	15¼	15

[fol. 326]

DEFENDANTS' EXHIBIT No. 39

Evaporation Test April 10, 1929

Carried on with Three Competitive Bakeries Bread, Purchased at a Store, said to be Perfectly Fresh Butternut White Wrapped Bread

	April 10			Apr. 11		Apr. 12	Apr. 13	Apr. 16	Apr. 17	Apr. 18	Apr. 19
	8:50 AM	2:50 PM 12 hr.	8:50 PM 18 hr.	2:50 AM 24 hr.	2:50 PM 36 hr.	2:50 AM 48 hr.	2:50 AM 72 hr.	2:50 AM 144 hr.	2:50 AM 168 hr.	192 hr.	216 hr.
	16½	16½	16¼	16¼	16	16	16	15½	15¼	15¼	15
	16	16	16	16	16	16	15¾	15½	15	15	14½
	16	16	16	16	16	15¾	15¾	15½	15¼	15¼	14¾
	17	17	17	17	16¼	16¾	16½	16	15¾	15¾	15½

Peter Pan White Wrapped Bread

	8:50 AM	2:50 PM 12 hr.	8:50 PM 18 hr.	2:50 AM 24 hr.	2:50 PM 36 hr.	2:50 AM 48 hr.	2:50 AM 72 hr.	2:50 AM 144 hr.	168 hr.	192 hr.	216 hr.
	16½	16½	16½	16¼	16¼	16	15¾	15¼	15	14¾	14½
	16	16	16	15¾	15¾	15½	15½	14¾	14¾	14¾	14½
	16	16	16	15¾	15¾	15½	15¼	14½	14¼	14	13½
	15	15	15	15	15	14¾	14½	14¼	13¾	13¾	13½

Old Home White Wrapped Bread

	8:50 AM	2:50 PM 12 hr.	8:50 PM 18 hr.	2:50 AM 24 hr.	2:50 AM 36 hr.	2:50 AM 48 hr.	2:50 AM 72 hr.	2:50 AM 144 hr.	2:50 AM 168 hr.	192 hr.	216 hr.
1	19 oz.	19	19	19	18¾	18½	18½	17¾	17½	16¾	16½
2	18	18	17½	17½	17½	17¼	17	16¼	16	15¾	15½
3	18	18	17¾	17¾	17½	17½	17¼	16¾	16½	16¼	15¾
4	17½	17½	17¼	17¼	17¼	17	16¾	16¼	15¾	15¾	15½

Butternut White Bread Wrapped

2:50 Apr. 20 240 hrs.
14¾
14½

[fol. 326]

DEFENDANT'S EXHIBIT No. 39

Evaporation Test April 10, 1929

Carried on with Three Competitive Bakeries Bread. Purchased at a Store, said to be Perfectly Fresh Buttercup White Wrapped Bread

	April 10			Apr. 11		Apr. 12	Apr. 13	Apr. 14	Apr. 17	Apr. 18	Apr. 19
	8:50 AM	2:50 PM	8:50 PM	2:50 AM	2:50 PM	2:50 AM	2:50 AM	2:50 AM	2:50 AM		
		12 hr.	18 hr.	24 hr.	36 hr.	48 hr.	72 hr.	144 hr.	168 hr.	192 hr.	216 hr.
	14½										
	14½										

Penn Pac. White Bread Wrapped

	2:50 AM Apr. 20 240 hrs.
1	14½
2	14¼
3	13½
4	13¼

Old Home White Wrapped Bread

1	16½
2	15¼
3	15¾
4	15¼

[fol. 327] DEFENDANTS' EXHIBIT 40 A

Affidavit

STATE OF NEBRASKA,
County of Douglas, ss:

H. W. Wehr, being first duly sworn on oath says:

That he lives at 621 North 21st Street, has been a baker by trade for the past twelve (12) years, and is now Superintendent in Charge of the O. P. Skaggs Bakery at 19th and California Streets, in Omaha, Nebraska;

That, with the assistance of Robert R. Strehlow, he purchased bread from the Omaha plants of the Schulze Baking Company and P. F. Petersen Baking Company, unwrapped it, weighed it, and shipped it with other bread to Cheyenne, Wyoming by express;

That he thereupon caused the bread to be returned to him at Omaha by express, when he weighed it and shipped it by express to Denver, Colorado;

That he thereupon caused the bread to be returned to him by express to Omaha, when he again weighed it; that after weighing he left the bread stand in the shipping room of the Skaggs Bakery without enclosing or covering it in any manner, until Monday afternoon, when he again weighed it;

That all the bread used in these shipments was fresh bread when first weighed, Schulze Baking Company representing that their bread was baked at three A. M. July 16th, and the P. F. Petersen Baking Company representing that their bread was baked during the preceding night, [fol. 328] and the Skaggs bread used was taken from the cooling racks and was still warm when weighed;

That the bread was purchased from the Schulze and Petersen Baking Companies on July 16th, and taken directly to the offices of the O. P. Skaggs System, where it was marked and weighed, at about 11:30 A. M.

That all the bread thus purchased from the Schulze and Petersen Companies and used in the experiment was hearth bread, and was delivered to affiant each loaf being wrapped individually in waxed paper;

That the waxed paper was removed from each loaf before weighing, and the bread was left unwrapped during the entire time, until the experiment was concluded;

That the bread was purchased at retail, ten cents a loaf being paid for both the rye and Vienna bread purchased from the Petersen Company, and eight cents a loaf being paid for both the rye and Vienna bread purchased from the Schulze Baking Company;

That loaves numbered one to six, were Schulze's Dixie rye, those numbered seven to twelve were Schulze's Butter nut Vienna; those numbered thirteen to seventeen were Petersen's Peter Pan rye bread; those numbered eighteen to twenty-two, Petersen's Peter Pan Vienna; those numbered twenty-three to twenty-seven were O. P. Skaggs raisin bread (a pan bread); those numbered twenty-eight to thirty-two were O. P. Skaggs Health Bread (also a pan bread);

[fol. 329] That after the bread had been unwrapped, marked and weighed, it was placed in a paper carton procured from the Schulze Baking Company, being the type of carton in common use by said Company, and by the other plaintiff companies for shipment of bread by express.

DEFENDANTS' EXHIBIT No. 40-B

That said carton was left unsealed, was bound with twine, was addressed to affiant at Cheyenne, Wyoming, and was received by the Railway Express Company with other bread for shipment;

That the Railway Express Company agent at Cheyenne, Wyoming was directed to re-ship said carton to affiant at Omaha, where it was received on July 18, opened, weighed at 1 P. M., and shipped in the same manner to Denver, Colorado;

That the agent at Denver was directed by telegram to re-ship it to affiant in Omaha, where it was received during the morning of July 20th, and was opened and weighed that day at 9 P. M.;

That the loaves were thrown back into the carton where they remained in the open carton, exposed in the shipping room of the O. P. Skaggs System until the afternoon of July 22nd, when they were again weighed, at about 2 P. M.;

[fol. 330] That the bread was weighed on the Toledo scales kept by affiant's company for weighing dough and bread; had been recently tested by a State Scale inspector, and had

been so levelled and adjusted by affiant that it weighed accurately;

That during the six days consumed in the weighing and shipping of this bread, the weather was hot and windy, and no rain fell in Omaha to affiant's knowledge;

That all the weighing and recording was done by affiant and the attached exhibit, marked Exhibit "A," signed by this affiant is a true record of the various weights of the loaves of bread on the dates, and at the times indicated at the head of the various columns;

That the loaves were baked, weighed and handled without any precautions being taken to prevent exposure to the air or to prevent evaporation;

That when the bread was returned from Cheyenne, Wyoming, in affiant's opinion it was stale and unsalable in the Omaha market, but was still edible bread;

That the waxed pieces of paper attached hereto, marked Exhibits "B", "C", "D" and "E", are examples of the wrappers actually removed from the bread as herein stated;

That the average loss per loaf during the seven days' experiment was (1) Schulze's Dixie Rye, 2.41 ounces (notwithstanding there were two twenty-six ounce loaves); (2) Schulze's Vienna bread, 1.41 ounces; (3) Petersen's Peter [fol. 331] Pan Rye Bread, 2.2 ounces; (4) Petersen's Peter Pan Vienna Bread, 1.6 ounces; (5) O. P. Skaggs raisin bread, 1.5 ounces; (6) O. P. Skaggs Health Bread, 2.1 ounces; that the loss per loaf averaged on the entire thirty-two loaves was 1.87 ounces or slightly over half the 3½ ounce tolerance allowed under the Nebraska 1927 Bread Law.

Further affiant saith not.

H. W. Wehr.

Subscribed in my presence and sworn to before me this 27th day of July, A. D. 1929. R. R. Strehlow, Notary Public.

[fol. 332] DEFENDANTS' EXHIBIT No. 40-C

Tests Conducted July 16 to July 22, 1929, by W. H. Wehr, Bakery Supt., O. P. Skaggs System Bakeries

Weights in Ounces of Unwrapped Loaves Used, Weighed at O. P. Skaggs System Bakeries on Toledo Scales

Loaf No.	Weight 11:30 A. M.	Weight July 18, 1 P. M. (after return from Cheyenne)	Weight July 21, 9 P. M. (after return from Denver)	Weight July 22, 2 P. M. (After exposed in shipping room	Amount of loss
		Schulze's Dixie Rye			
1	15 oz.	15 oz.	14 oz.	13 oz.	2 oz.
2	15	14	14	13½	1½
3	15	14	13	13	2
4	15	14	14	13	2
5	26	24	23	22	4
6	26	24	23	23	3
		Schulze's Vienna Bread			
7	15	15	14	14	1
8	15	14½	14	14	1
9	16	15	14	14	2
10	15	15	14	14	1
11	15	15	14	13½	
12	16	15	14	14	2
		Peter Pan Rye Bread			
13	18	17	17	15½	2½
14	18	18	17	16	2
15	17	16	16	15	2
16	18	17	17	16	2
17	18	17	16	15½	2½
		Peter Pan Vienna Bread			
18	16	16	15	14	2
19	15	15	14	14	1
20	17	16	16	16	1
21	16	16	15	14	2
22	16	16	14½	14	2

O. P. Skaggs Raisin Bread

23	16	16	15½	15	1
24	16	16	15½	14½	1½
25	16	16	16	14	2
26	16	15½	15½	15	1
27	16	15½	15½	14	2

O. P. Skaggs Health Bread

28	16	16	15	14	2
29	16	15½	15	14	2
30	16	16	15½	13½	2½
31	16	16	15½	14	2
32	16	16	15	14	2

[fol. 333] SUMMARY OF EXHIBITS 36 AND 51 TO 60, INCLUSIVE

Exhibit —

Summary of weather bureau data, taken from 1928 weather reports, as contained in the case of P. F. Petersen, et al., vs. Weaver, et al., Equity Number 261. The first column shows the city where the readings were made, the second, third and fourth columns show the average temperatures, humidity and wind velocity. In each of the three last columns the average is taken for the twelve months of the year. The temperature is in terms of degrees Fahrenheit. Relative humidity is in percentage and wind velocity is in miles per hour.

City and State	Temperature	Relative humidity	Wind
Omaha, Nebraska	50.8	69.1	8.6
Lincoln, Nebraska	51.1	69.5	9.9
North Platte, Nebraska	50.1	66.5	6.1
Des Moines, Iowa	49.6	71.5	7.6
Minneapolis, Minnesota	45	73	10.7
Chicago, Illinois	49	74	14
Indianapolis, Indiana	52.7	70.5	10.7
Columbus, Ohio	52	71	10.3
Boise, Idaho	52	57.5	4.2
Amarillo, Texas	58	60.5	8.
Phoenix, Arizona	69.8	42.5	4.6

[fol. 334] By agreement of counsel Defendants' Exhibit 1931-I sifpplementing the evidence of the defendants is made a part of this record and attached hereto as follows:

DEFENDANTS' EXHIBIT 1931-I

[fol. 335] The following is taken from Miscellaneous Publications, Bureau of Standards, No. 70, printed by the Department of Commerce, Washington, D. C., under the direction of Mr. George K. Burgess, Director.

The following matter is taken from the report of F. S. Holbrook, Assistant Director of the Bureau of Standards, Department of Commerce, Mr. Holbrook made the report as chairman of the Committee on Specifications and Tolerances on tolerances for bread, before the 18th National Conference of Weights and Measures, attended by weights and measures officials from various states and held at the Bureau of Standards May 26-28, 1925.

"Bureau representatives visited a baking plant and weighed 50 loaves each of two kinds of bread and 25 loaves of one other kind immediately after the bread was removed from the oven while it was still very hot. These loaves were then put upon the cooling racks, marked in such a manner that each loaf could be identified, and were allowed to cool in the ordinary way. Twenty-five loaves each of the first two varieties were wrapped at the usual time in the usual way. At periods varying from two to four hours after removal from the oven all the bread was weighed again, allowance being made for the weight of the wrappers in the case of the wrapped bread. All the bread was then placed in the ordinary wholesale delivery containers of the bakery and removed to a laboratory of the Bureau of Standards and there it was reweighed every few hours throughout a [fol. 336] period of about 90 hours after removal from the oven, at which time most of the bread was becoming moldy.

"The chart may briefly be explained as follows: Distance- along the horizontal line at the bottom of the chart represent the number of hours elapsing after bread was removed from the oven. Distances along the vertical line represent loss in weight of loaves based upon weight determined at the time of withdrawal from oven, given in ounces per pound and in per cent. The five lines of various characters sloping upward to the right show graphically how

the average weight of 25 loaves of each of five different kinds of bread decreased over periods up to 100 hours after leaving the oven. The five kinds of bread are the ordinary 1-pound loaf, unwrapped (solid line) and wrapped (dot-and-dash); the 1-pound lunch loaf, unwrapped, a long, square loaf baked in covered pans (dotted line); and the ordinary 1½ pound loaf, unwrapped (long-dash line) and wrapped (medium-dash line).

(Here follows chart, side folio 337)

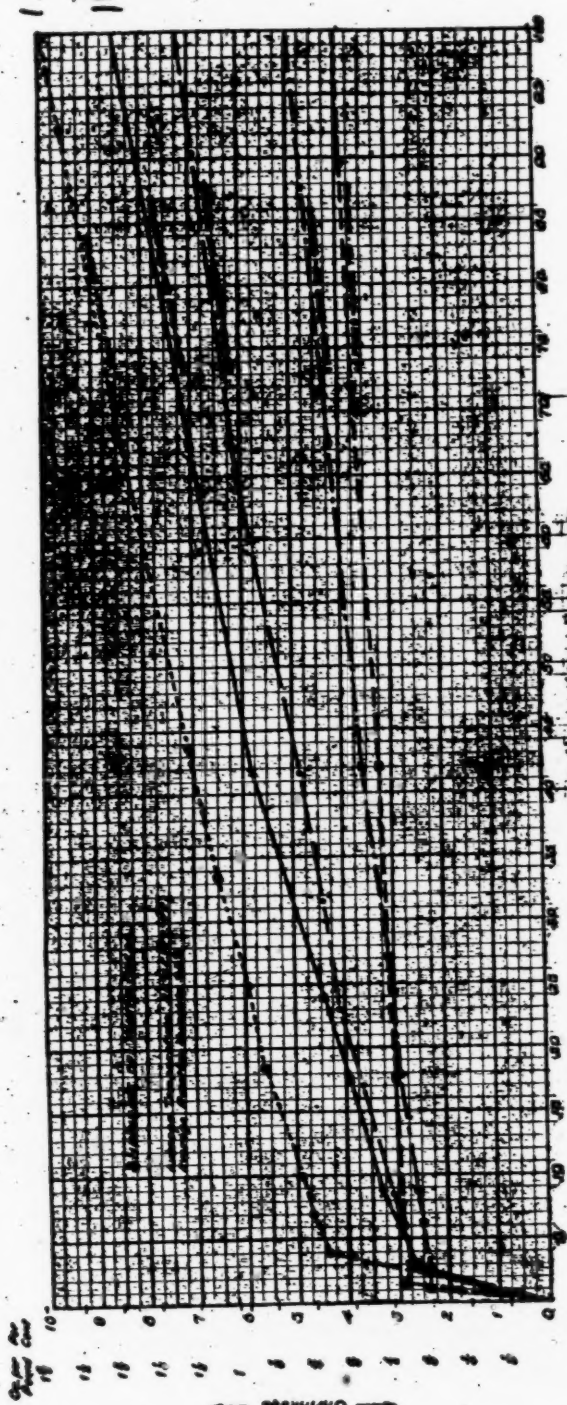


FIG. 13.—*Chart showing shrinkage of loaves of bread due to moisture loss*

[fol. 338] "It will be seen that bread shrinks very rapidly while cooling in the first hour or two after removal from the oven, as is evidenced by the steepness of the slope of the various lines in this region; after that period the shrinkage is much more gradual, and consequently the various lines are very much more nearly horizontal. The wrapped bread shrinks at slightly less than half the rate of the unwrapped loaves.

"To find the amount of shrinkage which has taken place in any kind of bread represented, a certain number of hours after its removal from the oven, run out along the horizontal line at the bottom of the chart until the desired number of hours is reached; then the shrinkage is represented by the vertical distance at this point between this horizontal line at the bottom of the chart and the sloping line representing the kind of bread in question.

"For instance, it will be seen that in four hours after removal from the oven the various kinds of bread plotted in this chart have all shrunk, four kinds being lighter by somewhat more than three-eighths ounce per pound; the fifth variety, the bread baked in covered pans and which tends to retain a much larger percentage of moisture during baking, is about eleven-sixteenths ounce per pound lighter than upon removal from the oven. Suppose it is desired to determine the total shrinkage from the time of removal from the oven up to a time 72 hours after removal from the oven. In the case of the two kinds of wrapped bread it will be seen that these are about five-eighths ounce [fol. 339] per pound light at the end of 72 hours. In other words, they have lost in weight only about one-fourth ounce per pound additional during a period of 70 hours, from 2 hours after baking until 72 hours after baking. In the case of the two ordinary unwrapped breads these are about 1-1/16 ounces lighter per pound 72 hours after baking. In these cases the shrinkage in the last 69 hours is about five-eighths ounce per pound. In the case of the special bread baked in covered pans these loaves average about 1⅜ ounces light 72 hours after baking. It will be seen that after the more rapid shrinkage in the first four hours this kind of bread shrinks no more rapidly than other unwrapped bread, the shrinkage in a 68-hour period having been about the same, namely, five-eighths ounce per pound.

"If it is desired to determine the shrinkage for a par-

ticular variety of bread during a period beginning sometime after removal of the bread from the oven, proceed as follows: Find from the chart, in the manner just described, the shrinkage which has taken place during the interval up to the beginning of the period in question; similarly, find the shrinkage for the interval up to the end of the period in question; the difference between these results will be the shrinkage for the period in question. Mechanically, this method reduces itself to locating, on the sloping line representing the variety of bread in question, and two points vertically above the two points on the horizontal line at the bottom of the chart which correspond to the number of hours after baking of the beginning and end, [fol. 340] respectively, of the period in question and reading directly, in terms of shrinkage, the vertical distance between them."

[fol. 341] IN DISTRICT COURT OF LANCASTER COUNTY

[Title omitted]

STIPULATION FOR TAKING DEPOSITIONS

It is hereby stipulated and agreed between the attorneys for the parties to the above entitled suit that testimony on behalf of either of the parties may be taken by deposition, before Sidney M. Smith, Notary Public, at the offices of the P. F. Petersen Baking Company, 12th and Jackson Streets, Omaha, Nebraska, on the 22nd day of September, 1931, at ten o'clock a. m., and continuing until such time as the same may be completed; that at the time of taking said depositions the testimony of Milton Petersen, P. F. Petersen, George J. Mascott, R. A. Laughlin, Ralph R. Smith and B. Sherman Whitney may be taken without the giving of the statutory notice and the issuance of the statutory commission is hereby waived.

[fol. 342] It is further agreed that the signature of the witnesses to said depositions be waived.

John C. Grover, Harold D. LeMar, Attorneys for plaintiffs. C. A. Sorensen, per R. R. S., Attorney General, State of Nebraska; R. R. Strehlow, Special Assistant Attorney General, Attorneys for Defendants.

[fol. 343] IN DISTRICT COURT OF LANCASTER COUNTY

[Title omitted]

DEPOSITIONS IN BEHALF OF THE PLAINTIFFS

Deposition of sundry witnesses taken before me, Sidney M. Smith, a Notary Public within and for the County of Douglas, in the State of Nebraska, on the 22nd day of September, 1931, between the hours of ten o'clock a. m., and six o'clock p. m., at the offices of the P. F. Petersen Baking Company, 12th and Jackson Streets, in the City of Omaha, in said County, pursuant to the annexed agreement, to be read in evidence in behalf of the Plaintiffs in an action pending in the District Court of Lancaster County, Nebraska, in which P. F. Petersen Baking Company, Schulze Baking Company, Continental Baking Company, General Baking Company and Quaker Baking [fol. 344] Company are Plaintiffs and Charles W. Bryan, Governor of the State of Nebraska, and Dwight F. Felton, as Deputy Secretary of the Department of Agriculture for the State of Nebraska, are defendants.

Harold D. LeMar, Esq., appeared as counsel in behalf of the plaintiffs.

Robert R. Strehlow, Esq., Special Assistant Attorney General, appeared as counsel in behalf of the defendants.

[fol. 345] MILTON PETERSEN, a witness in behalf of plaintiffs, testified as follows:

Direct examination:

I live in Omaha, Nebraska, and am Vice-President of the P. F. Petersen Baking Company. I have been engaged in the baking industry since 1919, nine years with the P. F. Petersen Baking Company, and have also had experience with the National Baking Company, of Columbus, Ohio, and Milwaukee, Wisconsin, and the Southern Baking Company of Austin, Texas. I am familiar with the methods employed and the customs and terminology of the baking industry, and the ingredients used. I am familiar with the corporate organization of the plaintiffs herein. The P. F. Petersen Baking Company has a paid up capital stock of $200,000.00, commenced business in 1891, sells its products

in Nebraska and surrounding States, and its present output exceeds ten million loaves of bread annually with a value of about $1,000,000.00; the Schulze Baking Company has a paid up stock in excess of $1,000,000.00, commenced business in 1906, and its present output exceeds seven million loaves per year, valued at about $500,000.00; the Continental Baking Company has a paid up capital stock in excess of $1,000,000.00, and with its predecessors has operated a branch plant in Omaha since 1913, with an annual output of about ten million loaves of bread valued at about $1,000,000.00; the General Baking Company has a paid [fol. 346] up capital stock in excess of $1,000,000.00, and with its predecessor has operated a branch at Omaha since 1925, has an annual output of about three million loaves valued at $250,000.00; the Quaker Baking Company has a paid up capital stock of $134,000.00, has been operating since 1905, with an annual output of three million loaves of bread valued at about $250,000.00. The baking of bread is the principal business of all the plaintiffs.

I am familiar with the provisions of House Roll 51, and the enforcement of this law will entail loss to the Nebraska bakers. It will require the investment of considerable money to replace equipment now used, particularly in pans and wrapping paper. The loss to the P. F. Petersen Baking Company in pans would amount to about $4,000.00, and in wrapping paper to from $5,000.00 to $6,000.00, with loss in other overhead and expense of from $1,000.00 to $2,000.00. I am familiar with the production of the other plaintiffs, and the Continental Baking Company's loss would be the same as ours; the General Baking Company's loss would be greater on account of their production being in a 20 oz. loaf of bread, which is prohibited. The Schulze Baking Company would suffer approximately half of our loss and the Quaker Baking Company one-fourth. The curtailment of sizes of loaves would affect our sales very materially in Iowa, and with the railroads running through [fol. 347] Omaha, as well as sales in rural communities in which the 20 oz. loaves predominate and which would be prohibited. This 20 oz. loaf of bread is manufactured by the Continental Baking Company, General Baking Company, Schulze Baking Company, and Quaker Baking Company as well as the P. F. Petersen Baking Company.

Exhibit 1931-A shows the production and sale of the various sizes and types of bread by the P. F. Petersen Baking Company for 1930 and eight months of 1931 in loaves and percentage, and shows the production of 20 oz. bread. These figures are taken from the original records of the P. F. Petersen Baking Company.

I am familiar with the methods employed in the manufacture of bread in wholesale bakeries, and with the elements which enter into the loss or gain in weight of bread loaves. These variations occur throughout the production from start to finish. The first losses or gains occur in the flour while in storage, and depend on atmospheric conditions. The next variations occur during fermentation, and the next in the machine called the divider which cuts the large doughs into small pieces, each piece making a loaf of bread. The next losses occur in the rounder; the next in the proofing machine, and the next during the baking process in the oven. Further losses occur in the cooling process before wrapping and after wrapping. Atmospheric conditions cause variations in flour weight during storage. The flour is purchased and delivered to us with a guaranteed [fol. 348] maximum moisture content fixed by Government standard, and this flour is subject to various degrees of humidity and temperature during shipment and storage. During very moist weather the flour actually picks up weight per sack in moisture absorbed from the air, and during dry weather flour loses weight due to evaporation of this same moisture. This variation continues throughout storage, and in our plant the flour is kept from two to eight weeks before being baked into bread.

Losses occur during fermentation of the dough which averages about two per cent. The dough contains a very large percentage of water, and if the atmosphere outside is near saturation there will be little loss; if the atmosphere is dry there is a tendency for the moisture in the dough to equalize with the outside atmosphere and the dough dry out or lose moisture.

The machine known as the divider receives a stream of dough from the dough room; at the bottom of the divider is a carriage which has a large pocket with a plunger in it and four small adjustable cavities; a large plunger forces the dough into these cavities at the rate of approximately 48 per minute. These cavities are adjustable in size to re-

ceive a certain volume of dough which the baker estimates will produce a loaf of an anticipated weight. This dough, when passing into the divider, is in a very high state of fermentation, which means that there is a large volume of [fol. 349] carbon dioxide gas in it, sometimes evenly distributed and sometimes in bubbles or pockets. The large plunger forces the dough into the small cavities and whenever gas bubbles or pockets appear in those pieces they will come out of the machine lighter than anticipated. The whole principle of the machine is to scale dough by volume rather than by actual weight. There is no other machine known to the baking industry for scaling dough.

After the dough has passed through the divider it comes out in small pieces suitable for manufacture into loaves. At this point wheat flour is sprinkled on the dough pieces to prevent them sticking to belts and other machinery. The amount of flour clinging to the loaf varies. In the first place in very humid weather it is necessary to use more dusting flour, and some pieces of dough pick up more of this dusting flour than others. The dusting flour is sprinkled continuously on belts underneath the dough, and some pieces pick up more dusting flour than others.

After having passed from the divider, the dough pieces are conveyed by a belt from six to twelve feet to the rounder. The rounder is built like a large revolving funnel with a stationary spiral on the inside, and a piece of dough falls into the bottom of the funnel and is then carried by the revolving funnel itself along the stationary spiral inside. This action rounds up the piece of dough which [fol. 350] is odd shaped when it goes up into it, into a round ball, and during this process dusting flour is sprinkled inside of the funnel to keep it from sticking. Sometimes a piece of dough, when it hits the bottom of this funnel, pinches off a small piece of dough against the bottom of the spiral and the next loaf that comes along picks up that dough. That results in variations in loaf weights.

After having passed through the rounder the pieces of dough pass into a proofing machine. This is a series of conveyor belts, and the dough passes along these conveyor belts for a period of six to twelve minutes, all of which time it is exposed to atmospheric conditions. These conveyor belts are sprinkled with flour to keep the dough from sticking to them, and various pieces of dough pick up vary-

ing amounts of dusting flour because of variation in spacing as the pieces of dough go into the proofer; the dusting flour is sprinkled continuously whether loaves are passing through the machine or not.

After the dough passes through the proofer it goes to a molding machine. This machine curls the piece of dough and then rolls it out into the proper shape for a loaf of bread. During the molding process two and sometimes three mechanical sifters sprinkle dusting flour on the loaves to prevent the loaves from sticking to the rolls and drums of the molding machine. This dusting process is continuous and varying amounts of dusting flour attach themselves [fol. 351] to the loaves. This dusting flour is incorporated into and becomes a part of the loaf of bread.

After the dough has gone through the molder it is placed in pans at the end of the molding machine. These pans are greased with lard or vegetable oil to prevent sticking. This pan grease become- incorporated into and is made a part of the loaf of bread. The amount of grease placed in the pans will vary and will result in a variation of loaf weights. After panning the loaves pass through the proof box where they rest from 40 to 80 minutes to rise. After that they are moved to the oven.

There are two general types of ovens which are classified as peel ovens and traveling ovens. The peel oven is the one described in previous testimony herein and is one in which the first loaves inserted are the last loaves removed. The traveling oven is really a long conveyor within solid walls, and outside of these solid walls are fire boxes. There are pipes into this oven that extend out into the fire boxes and these pipes carry by means of steam the heat from the fire boxes into the oven itself. The bread passes on the conveyor from one end of the oven to the other, over the pipes and under the pipes from various fire boxes until it reaches the discharge end of the oven, at which point it is presumed to be baked. There will be a variation in temperature in various portions or compartments of this trav- [fol. 352] eling oven as the result of variations in heat in outside fire boxes. These variations result in some loaves being more thoroughly baked than others and consequently lighter in weight than others. The loaf takes 35 minutes to bake. The P. F. Petersen Baking Company use both the peel oven and traveling oven. The Schulze Baking

Company use both kinds; the General Baking Company use both kinds; the Continental Baking Company use peel ovens, and the Quaker Baking Company use peel ovens.

During the process of baking, during the time when a loaf of bread leaves the fermentation room and while it passes through the divider, rounder, proofer and molder, there is evaporation. There is slight loss by evaporation in the proof box, the reason being that the proof box is kept at a relative humidity of about 95 per cent. The entire baking process is an evaporation process. When a loaf is mixed, before baking it contains from 54 to 65 per cent of moisture, and when coming from the oven contains approximately 38 per cent. The Government standards provide a maximum moisture content of 38 per cent in baked loaves. The evaporation losses during baking vary with different loaves. A baker can do nothing to make this loss uniform.

Assuming a number of loaves scaled identically the same at the divider, there will be no variation in the food value of the ultimate loaf of bread, but there will be a variation in weight resulting from moisture evaporation. There is [fol. 353] no food value in this moisture.

After the loaves pass through the oven and have been baked they are cooled about two hours before wrapping. They are wrapped in wax paper by a machine. Some are sliced before wrapping.

After wrapping the loaves are ready for sale. Some loaves are sold immediately and others are held in the bakery for several hours before delivery, probably averaging 12 hours. If an inspector of the Department of Agriculture were to visit the bakery to weigh loaves of bread, there would be no way for any person to tell whether the particular loaves he examined and weighed were 12 hours of age or less.

Sliced bread is a regular bread which has been through a machine which slices it into a large number of slices one-half inch thick. The slices are then wrapped as a loaf of bread. This is a new development of the past 12 months. Exhibit 1931-A shows the large number of sliced bread loaves sold by the P. F. Petersen Baking Company. Sliced bread will evaporate moisture more rapidly than unsliced loaves since the inside is exposed to the atmosphere and moisture can evaporate with greater facility. The slicing

process is accomplished by rapidly moving knives or saws through which the loaf is forced. This slicing process causes particles of bread like sawdust or crumbs to be shed [fol. 354] from the loaves. There is no way of determining the exact amount which will be lost by this crumbing process.

After baking and wrapping the bread is delivered into the hands of the retail customers by truck in the city and within a certain radius in suburban districts, by common carrier trucks to greater distances, and by railway express to more distant points. The retailer displays his bread mostly by storage on top of open shelves or counters; a small part of it is still stored in glass cases on the shelves. Bakeries permit bread to remain in the hands of the retail dealers for from 48 to 72 hours, and if not sold in that time the bread is returned to the bakery as stale bread. During the summer bread is usually picked up at the end of 48 hours, and in hot, humid weather, when it is apt to mould quickly, some bakeries take it out in 24 hours.

During all this time and until it is consumed, bread continues to evaporate moisture. This evaporation is variable, depending upon the weather. A loaf of bread could even lose moisture for a while and then pick up moisture.

After bread becomes stale in the hands of the retail dealer, it is exchanged for fresh bread by the baker, and the stale loaf is brought back to the bakery where it is sold to a poor class of people at a considerable discount. If it is mouldy it is taken to the dump or sold to the hog farmer.

A barrel of flour weighs 196 pounds and contains 13½ [fol. 355] per cent moisture. This barrel produces approximately 300 pound loaves of bread. The practice among commercial bakers of taking care of small increases or decreases in ingredient cost is to vary the weight of the loaf to correspond to the ingredient costs. This is the uniform practice of the baking industry both here and in Europe. Flour must decline $3.00 per barrel before the baker can reduce the price of his loaf of bread 1¢ per loaf, and the reverse would be true in increasing prices. During the past two years there has been a change in the price of bread in this area whenever flour varied as much as $3.00 a barrel, and small changes have constantly been reflected by variations in loaf weights. During the past two years there

have been times when the one pound loaf weighed as much as 19 oz. Since the last price change the present loaf averages about 17 to 19 oz. When the ingredient costs were reduced the loaf weight was raised to 19 oz. and thereafter, upon further reduction in ingredient cost, the loaf was reduced in price and the weight reduced to 16 oz. The weight of the smallest loaf of bread manufactured by any of the plaintiffs is 12 oz., which is sold at 4¢ wholesale and retails at 5¢. The 16 oz. loaf of bread now wholesales at 6¢ and reails at 8¢ or two loaves for 15¢.

I made tests to determine the evaporation which will take place in a loaf of bread after baking. These tests were made in the bakery of the P. F. Petersen Baking Company with loaves from various bakeries. Exhibit 1931-B shows [fol. 356] the result of these tests. Page 1 of this exhibit shows Peter Pan bread made by the P. F. Petersen Baking Company scaled 19½ oz. at the divider. There were two tests of 10 loaves each, all wrapped, 10 of which loaves were sliced bread. The second column shows the baked weight of the loaf, and the column marked "6-hour weight" shows the weight 6 hours after wrapped, and the "12-hour weight" column shows the same loaf 12 hours after wrapping. Other columns show the temperature and humidity of the room in which the loaves were kept, and whether or not there was circulation of air. The loaves numbered 11 and 12 were kept in a different room than the other bread, and the loaves marked 3, 4, 13 and 14 were kept in still another room in which there was no circulation of air. Page 2 of this exhibit refers to bread of other companies, the top half of the page refers to Bond bread manufactured by the General Baking Company, and the bottom half refers to Butter Nut bread made by the Schulze Company. These loaves, in each instance, were wrapped bread. Page 3 of the same exhibit refers to bread of other companies, the top half of the page 3 refers to Wonder bread manufactured by the Continental Baking Company, and the bottom half of page 3 refers to Quaker bread manufactured by the Quaker Baking Company. These tests were made under my supervision and control, and pages 1, 2, and 3 correctly show the results of my tests.

[fol. 357] Unwrapped bread is still offered and sold in Nebraska. I am familiar with the type of bread used in restaurants and public eating establishments in the vicinity of

Omaha. This loaf is so-called Pullman shaped; it is a loaf with a square flat top instead of a round top like household bread. It is much longer than household bread varying from 16 to 22 inches in length, which gives greater economy since there are fewer crusts. These loaves are in two sizes, one weighing approximately 2½ pounds and the other approximately 3½ pounds when baked. These loaves cannot be scaled lighter for less dough will not fill the pan. These pans were originally furnished bakers by the railroad dining car service to produce loaves which would fit into bread containers in dining cars. These same types and sizes of loaves were adopted by restaurants throughout the territory, and the restaurants demand this size loaf. Mechanical toasters are in use by restaurant operators, which toasters are built to accommodate this particular size loaf. None of these toasters are manufactured in Nebraska.

Through my experience I am familiar with the terminology of the baking industry. I am not familiar with what constitutes "fancy bread". There is no such term in the baking industry, except that each of us sometimes refer to our bread as being fancy bread; we generally refer to it as being better than somebody's else bread. In that connection fancy bread would refer to bread of superior grade or quality.

[fol. 358] Through my experience and through actual tests I find it necessary to scale 20½ oz. of dough to produce a loaf weighing approximately 18 oz. If I continuously scaled dough at 20½ oz. some af the resulting loaves would weigh more than 18 oz. and some less. It would not be practical or possible to avoid having over weight bread if it was all scaled at 20½ oz. Scaling 19½ oz. would produce loaves averaging about 17½ oz.; some of these loaves would run up to 18 oz., and others would drop as low as 17 oz. or lower; some loaves might drop below 16 oz., and some would weigh over 18 oz.; the average would be 17½ oz., which would allow, on the average loaf for an ounce and a half of evaporation. I have made computations to show the amount of moisture content in a loaf weighing 18 oz., 17½ oz., and 26.4 oz. These computations are based upon the moisture content of 38 per cent, and to show that an 18 oz. loaf contains 11.16 oz. of solids and 6.84 oz. of moisture. If this loaf were reduced by evaporation from 18 to 16 oz. it would still contain 4.84 of moisture. The moisture content would be re-

duced from 38% to 30% which is 71% of the total moisture permitted by Federal regulations. The same is true of the computations on the 17½ and 26.4 oz. loaves. These computations are shown as Exhibit 1931-C. This reduction in weight would not change the weight of the solids and would not reduce the food value of the loaves. A loaf containing 20% to 38% moisture is considered an eatable loaf.

[fol. 359] No dissatisfaction has ever been expressed by the buying public with the methods used by the baking industry of varying weights of the loaves of bread in accordance with the price of ingredients.

A 20 oz. loaf of bread is manufactured from the same ingredients and materials as loaves of the other sizes. It contains food value in proportion to its weight in equal percentages as other loaves of the same manufacturer. It is a wholesome article of diet and no reason exists, to my knowledge, why this loaf should be prohibited. If it is prohibited there will be a loss of business in certain communities by reason of the housewife resuming home baking.

Cross-examination:

The P. F. Petersen Baking Company bakes one pound loaves and 24 ounce loaves. Our pans and other baking equipment are used 24 hours a day. It has been our practice to change loaf sizes with ingredient costs. We do not bake one size loaf in a pan designed for another size loaf. We cannot bake a 20 ounce loaf in a 24 ounce loaf pan; we can bake a 22 ounce loaf in a pan designed for 24 ounces. Pans must conform to the size loaf intended. It is necessary to carry a large variety of pans, but pan changes are not necessary for small changes in loaf sizes. By small change [fol. 360] I mean a change of one or two ounces. Our sealing weight for the 1½ pound loaf varies considerably according to the cost of ingredients, the variation being as much as two ounces. Our loss of $4,000.00 if we must discontinue manufacturing the 20 ounce loaf, refers to the cost of discarding the pans we now have on hand. We have about 900 straps of these pans, four or five pans to a strap, the market cost of which is about $3.50 to $4.00 per strap. We order wrapping paper every 60 days. We buy a six months supply of paper for each variety at a time, in order to get an economical price, but order different varieties every 60 days. We get

our paper about four weeks after ordering. This comes from Kansas City, Missouri. It takes this long because the printer buys his paper stock from Connecticut, Michigan and other places, and he purchases this stock after we place our order with him; sometimes we have to wait as long as 90 days. He could use his paper stock for printing wrappers for 16 ounce loaves or 24 ounce loaves as ordered, but as a practical matter he gets his price from the paper mills on the basis of poundage, and we get our price from him in the same way: the greater the volume or run he can make at one time, the lower the price. Our schedule of price at the present time runs all the way from $9.67 per cwt. to as high as $19.00 per cwt. depending on how many pounds we buy [fol. 361] at a time. We could save ourselves from loss on discontinued sizes by not ordering additional paper of this size, but we would have a loss of a smaller amount of paper on each order.

It is not more expensive to manufacture 100 pounds of bread in the 24 ounce size than it is to manufacture the same number of pounds of bread in the 20 ounce size. The handling is just as easy but it takes longer to bake it, on account of the greater mass, it takes longer for the heat to penetrate, and we do not get quite as desirable a loaf on the inside; the center gets rather steam cooked than baked. We manufacture loaves weighing two or three pounds. We make a 24 ounce hearth bread in which no pans are used. This is wide and round; it is more thoroughly baked. We have had many complaints of steam cooked bread in the 1½ or 2 or 3 pound sizes. That is not due to the shape of the loaf. You cannot elongate a loaf longer than 12 inches as a practical matter, because it won't go through the slicing machines, and is very difficult to handle to get a good loaf of bread. It has been tried here and discontinued. Bakers generally do conform to a standard shaped loaf. In two previous litigations affecting bread laws in Nebraska, testimony was offered regarding the popularity of the 16 ounce and the 24 ounce loaves. No mention was made at that time of the 20 ounce loaf.

[fol. 362] The sliced bread used in the mechanical toasters comes from bread baked in covered pans which give a square shape. In these loaves you cannot vary your weight: a mechanical toaster requires a slice of a given dimension. Most of these loaves are 2½ or 3½ pounds.

We could design a pan just a little shorter than the 3½ pound pan which would produce a loaf weighing three pounds, in which the slices would fit these mechanical toasters, but it would increase the waste on account of a greater number of ends, and the railroads would object on account of it not fitting their compartments. As a result, we would lose that trade to Salt Lake City and Chicago. I am familiar with the bread weight laws in other States, Texas and California are the only two that I know of that have bread laws that are semi-operative. Ohio has none any more; Iowa has none; I don't know about South Dakota. I operated in Ohio, and I know their law has not been operative for years. Massachusetts has one but it is very flexible. You can make your bread any weight you want, provided you stamp your weight on it. You can make any size loaf of bread other than the standard provided you mark it; if you don't mark it, you have to conform to the standard. I do not know whether other states permit a 2½ or 3½ pound loaf.

[fol. 363] The reference to Exhibit 1931-A shows the wholesale selling price of that quantity of bread; the twin loaf listed in the exhibit weighs 22 ounces as a combined loaf. The two parts of the twin loaf cannot be broken apart and sold as two loaves. There is an advantage in the 22 ounce loaf from the sales standpoint as it can be sold at a profit at this time to retail at 10¢. To raise that loaf in weight two ounces would require raising it to the public a full cent, and the public would be overcharged because the smallest unit of coin is the penny. Our 20 ounce round top loaf retails for 10¢, and our 22 ounce split type loaf retails for 10¢. We are making it profitable for the customer to purchase the 22 ounce loaf.

The various stages in the baking operation when dough passes through the divider, rounder, the proofer and so forth is all a part of the manufacturing process but is not a part of the baking process itself. The baking process is while the pans are actually in the oven. We mix our dough in a mechanical mixer, and the flour, in all instances gets the same amount of water in mixing, as we have no way of measuring the amount of water in the flour day by day and hour by hour. If the dough should run unusually slack, as we call it, we would cut off a small amount of water. [fol. 364] We would know then that there is more water in

the flour. The practical baker knows what is a stiff dough and what is a slack dough, and if the dough isn't quite as stiff as he wants it, he knows there is a little too much water and he cuts down the water, as he needs it. He cannot cut on the dough already made once the dough is mixed he cannot cut the water content of that dough. He can temper it a little on the following dough; if he got it too slack on one dough he would have to go on and use it. A definite formula is used in manufacturing bread.

As to the additions of dusting flour in the baking process, the dough is constantly in motion and it will pick up a large amount of flour; moisture in the dough grabs the flour. As the result of this dusting flour addition there will be a small variation in weights. All the dusting flour used on the machinery comes out with the finished product and becomes a part of the loaf. None of it goes to waste. If it does not go on one loaf it will be picked up by some other loaf later.

The successful baker is not a speculator; he does not speculate in flour. The most successful baker is the one who buys his flour on the market as he uses it. I do not know how most bakers buy their flour. Our company sometimes contracts for flour in large quantities but other ingredients cannot be purchased over 60 days ahead. For the past [fol. 365] ten years we have bought most of our flour priced right on the day it was shipped to us. The variation in the cost of a loaf of bread then as between bakers would depend upon the market upon which he bought his ingredients. We figure our costs not upon market quotations but upon actual cost to us. Theoretically one baker might be giving a little extra weight on account of his ingredient price, and another baker might be doing just the opposite. As a practical matter, however, they all go to the top weight or the greatest weight on account of competition. Bread is often sold at a loss. This is largely on account of bread having been used as a leader to attract customers into a store.

We control the humidity in the fermentation room but not throughout the remainder of the manufacturing process. We do not add water to our oven to keep down the amount of evaporation that takes place during the baking. Some bakers add a little steam in the oven to give a thin crust.

After baking and during the cooling process the loaf loses moisture by evaporation. After cooling the loaf is wrapped and loses moisture more slowly but continues to lose it. The tests to which I have testified were all made with wrapped loaves.

We grease our pans by hand with a cloth soaked in oil. An effort is made to touch every part of the pan with some [fol. 366] grease. The spreading of grease is not uniform.

The traveling oven is a new devolpment in oven manufacture. This is a labor saving device.

When the loaves are baked in our plant they are placed on a continuous conveyor where they are cooled. The bread cannot be removed from this conveyor until it passes completely through the cooler which takes two hours. From the cooler it is conveyed to the wrapping machine and from there it goes to the shipping room where it is placed on racks ready for delivery. The man who places the wrapped bread on racks does not know when the loaf was baked. He might if all the bread was shipped by truck but with us it is a continuous process of meeting train schedules throughout the 24 hours. If an inspector came to our plant to inspect bread, we could show him a lot of bread that had been manufactured within 12 hours; if he went into the shipping room and found some bread, some of it may have been there almost 24 hours. If the inspector picked five or more loaves to be weighed he could not tell whether the bakery was intentionally breaking the law or not, as even in a traveling oven there are hot spots and hot times in the oven, and the temperature is down in other spots so you might get a volume of 500 or 600 or even 1,000 loaves which were not baked out as thoroughly as the following 600 loaves. You will notice from our exhibits that loaves coming out of the [fol. 367] oven rather short in weight due to evaporation in baking seem to continue evaporation almost as fast as loaves losing less weight in baking. In other words, loaves meeting the same atmospheric condition seem to evaporate at a fairly constant rate regardless of what their oven discharge weight was.

In the slicing machine there are saws placed one-half inch apart across the width of the loaf so the whole loaf is cut by one process. The parts of the crust and loaf are pushed apart as the knife goes through and are then pushed back together again. We do not use trays to hold

this sliced bread but the slices are held together by the wrapper. These wrappers are not air tight and there is a circulation of air between the slices. Mould in bread is due to exposure to air; the more a loaf is exposed to the air the quicker it will mould. This moulding process is due to the growth of a fungus or one of a group of fungi that reaches the loaf through the air. It works faster in the absence of light and in the presence of heat and moisture. I kept these weights on the exhibits myself. Certain loaves shown on sheet 1 of Exhibit 1931-B were kept in the room where we now are; certain other loaves were kept in the dough room which has controlled temperature and humidity. The humidity is 93% in the dough room. The balance [fol. 368] of the exhibit were kept in a room in which the temperature ranged from 99 to 101.

I have never consulted the weather reports to see which months of the year show the least humidity.

This law makes no provision for the sale of bread after it is 12 hours old. It says the loaf should be weighed within 12 hours so that a prosecution on that bread which is weighed after the 12 hour period would not be good.

I stated that the price of flour would have to go down $3.00 a barrel to warrant the 1¢ reduction in a pound loaf of bread. In other words, if flour were given to us today we could reduce our price only 1¢ per loaf. In the early history of England for many centuries and the early ordinances of Washington, D. C., the price of bread was a matter of custom and the weight was fluctuated with ingredient cost. The P. F. Petersen Baking Company does not undertake to fix the retail price of bread. We do not permit the retailer to deliberately undercut a competitor and cause a local neighborhood fight as it destroys the public confidence in our product, and we stop it. We use moral persuasion on the grocer.

In the retail store our driver carries the bread in and puts it in the case or on the shelf where the retailer keeps it. When it is stale he returns it to the bakery. We do not start baking bread at a given hour for a given trade. [fol. 369] We start on Saturday night and bake bread all week. The bread goes out in time to meet the various calls for it. We aim to have enough bread coming out of the machines to take care of everything that is ordered and that there is a demand for. Our schedules call for a wide

variety of bread. For example, we can bake whole wheat and raisin bread only once a day. The whole wheat and raisin bread that goes out on all trucks and all trains tomorrow is baked at noon today; the rye bread that goes out on all trains up until noon tomorrow is being baked today right now. Some of the bread we can bake only once a day. These are variety breads.

We claim our general run of bread is of superior grade, better than the average bread manufactured by most bakers. We speak of our white bread as a certified bread because it carries on it the seal of the American Medical Association and the Good Housekeeping Institute, and we designate our white bread in relation to other bread as you might designate certified or grade "A" in contra-distinction to ordinary milk. In producing a 20 ounce loaf of bread we scale the dough approximately 23 ounces: We watch our scaling weight to see that it is correct. The man at the divider or scaling machine has a very accurately balanced scale and he can grab about one loaf out of ten and weigh it. The scale shows him [fol. 370] the tendency; if the loaf is running heavier than the balance he will reduce the size of the pockets a little; if there is an unusual amount of carbon dioxide gas in the dough he cannot always gauge the weight accurately; the carbon dioxide appears as bubbles; ordinarily these bubbles are about as big as a quarter; these are not distributed evenly in the dough. No baker can produce 20 or 50 loaves which will weigh exactly what he figures they will weigh. I have never known of any demand in Nebraska for the adoption of a bread weight law. If the inspectors enforce a bread law such as the present law bakers would be arrested and would receive adverse publicity. This would be detrimental to the whole industry and would tend to drive some people to home baking through lack of confidence in the baker. This would be detrimental to the wholesaler and in favor of the small retailer. The great driving force in giving full weights is not a law like this but competition. We are not opposed to a standard weight law but do object to the maximum tolerance provision. I do not believe that a standard weight law should bar a popular loaf and a loaf that is tremendously popular with many families, like the 20 ounce loaf.

If we lose the restaurant operator through inability to bake the size loaf he demands he will bake his own loaf. He would not be subject to the weight law as he is not bak- [fol. 371] ing the bread for sale.

In the bread shown on Exhibit 1931-B, pages 1, 2, and 3, the scaling weights are absolutely correct as each loaf was weighed as it left the dividing machine. These tests show rapid loss during the first 6-hour period, gradually tapering off with additional time.

Redirect examination:

Bread must go through the cooling process before it can be wrapped. If an inspector came into the plant of the F. E. Petersen Baking Company where perhaps 25,000 loaves are displayed on the shipping floor in various forms and picked out five loaves to suggest them to the weighing process, it would be an unfair test of whether the baking company was observing the weight law.

The process by which the price of loaves is lowered by reduction in the ingredient cost may be illustrated as follows: If flour were $9.00 a barrel and were reduced to $8.00 a barrel, a loaf wholesaling at 8¢ would probably weigh 16 to 17 ounces. In the event of a reduction in price of flour to $8.00 per barrel there would be no change in price but an ounce of dough would be added to the loaf; if it were reduced to $7.00 per barrel another ounce of dough would be added: and if the flour were reduced to $6.00 per barrel the price would be reduced to 7¢ whole- [fol. 372] sale and the weight reduced to 16 ounces. The same process would be followed with further reductions. Competition is very keen in the baking industry. Every housewife is a potential competitor; many are actual competitors; if the baker is unfair in his trade practices the housewife will always return to home baking.

RALPH R. SMITH, a witness on behalf of the plaintiff, testified as follows:

Direct examination:

I live in Omaha. I am manager of the Omaha branch of the General Baking Company. I have been engaged in the baking industry approximately 20 years, 6 years with

the General Baking Company and previously with the Smith and Great Western, Kansas City, and with the Jung Baking Company of Joplin, Missouri, and the Quality Baking Company, Joplin, Missouri. I am familiar with the terminology of the baking industry. There is no technical term in the baking industry which applies to a particular class or type of bread which is called "fancy bread." Any loaf of unusual quality, whether it be white bread or some other bread, may be termed as fancy bread.

I have been with the General Baking Company six years. The General Baking Company operates 52 plants scattered throughout the United States. The local manager directs the operations of the local plant and recommends changes [fol. 373] to superior authority who are located in Kansas City, Missouri, and our general offices in New York City. Our offices and officials have made many surveys of the types and sizes of bread loaves best suited to the communities in which they operate. They have selected the 20 ounce loaf as the most popular for the Nebraska territory. The public has demanded this loaf and we have not tried to get away from it but have supplied the natural demand. Our bread is manufactured under the name of Bond bread and Old Home Bread. Bond bread is a loaf weighing around 21 ounces when baked. This loaf is wrapped and labeled 1 pound 4 ounces and sold as a 1¼ pound loaf and charged for as such. I have made an investigation to ascertain the proportion of 20 ounce bread sold by our company in comparison with other weights. I took an average of six weeks. The percentage of 20 ounce bread for the six weeks averaged from 79 to 81.2 per cent of our total volume of business. The 20 ounce loaf is manufactured of the same ingredients and materials as our other bread. It is a wholesome food product of the same food value in proportion to its size and weight as other loaves. If we are prevented by this law from selling a 20 ounce loaf we would suffer practically a total loss of our nationally advertised loaf, Bond Bread, and we would be unable to [fol. 374] convert all of our business on this loaf to other sizes or types.

Cross-examination:

I have never operated in a state where they have a bread weight law other than that requiring the weight to be

marked on the wrapper, except in Council Bluffs, Iowa, which we sell from the Omaha plant. Our Bond Bread is nationally advertised and manufactured all over the United States in approximately the 20 ounce size. This loaf is approximately 15 years old, and we have made that loaf in certain sizes only. We have only one size in this territory. One of the reasons for the popularity of this 20 ounce loaf is on account of the average size of family. The average family of three or more will consume a 20 ounce loaf of bread. A family of two may not consume a full 20 ounce loaf of bread per day. A family of six would probably consume two loaves. This loaf is particularly adapted to a family of about three people. If we are required to add three ounces to this loaf we must change our loaf to a larger pan which would cause many housewives to return to home baking rather than to see a waste of bread going out of their kitchen. The 20 ounce loaf of bread retails in Omaha for 8¢. The present price of a barrel of flour is about $4.00. A year and a half or two years ago [fol. 375] flour varied in price. We scale our 20 ounce loaf of bread at 25 ounces. We sell this loaf in Council Bluffs, Iowa. This bakes out around 21 ounces. If Bond Bread were baked at 24 ounces, we would not have to change our advertising but we would probably have to change our present equipment.

Redirect examination:

The Iowa law prevailing in Council Bluffs permits the manufacture and sale of a 20 ounce loaf of bread. Our present Bond loaf, 20 ounce loaf, wholesales at 8¢ and retails at 10¢. Our company makes small changes in the weight of the loaf in accordance with changes in price of ingredients. If the 20 ounce loaf is eliminated we would not be able to use the pans that we have on hand. This would entail considerable loss running into Hundreds of Dollars and would be in addition to our loss of business.

Recross-examination:

We do not attempt to control the price the retailer charges for our bread. We mark the price of Bond bread on the wrapper for the public's benefit. We do not blacklist the grocer attempting to sell bread below the wholesale price.

We have our paper printed in from 10 to 15 weeks' supply. We place our order once every five weeks and we [fol. 376] have to give the printer from five to six weeks notice before we receive the wrapper. Raisin and nut breads are not called fancy bread. They are called by their name of raisin bread and nut bread. There is a distinction between hearth bread and pan bread. My company manufacture and sell raisin bread but no nut bread. We advertise it as Bond Bakeries Raisin Bread.

We do not control the atmospheric condition of our room where the dough is kept before it gets to the oven.

Redirect examination:

I heard the testimony of Milton Petersen as to the processes followed in the baking industry. That is a correct statement of the methods and processes used by the General Baking Company at its Omaha plant and the other plants as well as by all bakers who use modern machinery. There is nothing about raisins as the result of which, when incorporated in a loaf of bread, would make that bread fancy bread. Raisins at the present time are proportionately cheaper than flour so that the baker can incorporate raisins in a loaf of bread and still have a cheaper loaf than he could if made out of straight flour.

Recross-examination:

We have a man at the divider who weighs a loaf from time to time to see whether or not it is coming up to the [fol. 377] weight which we expect. If he over-scaled an ounce this would amount to a great number of pounds in a day or a week or a month, and would be of considerable interest to the management. We attempt to be accurate in our scaling.

Where dusting flour is used to prevent sticking of the pieces of dough, it varies in amount. The first dusting flour added to the loaf at the divider goes only on one side of the dough; as it goes to the rounder another portion gets dusting flour; as it goes up the elevator to the overhead proofer another side comes in contact with dusting flour. The loaf can add dusting flour from four to six times as it goes through the process.

Redirect examination:

As the dough comes from the divider it is square in shape; when it leaves the rounder it is as near round as possible. The rounding process, therefore, exposes new sides for the addition of dusting flour. During the molding process the shape of this piece of dough is again changed and new and raw edges are again exposed to the attachment of dusting flour.

R. A. LAUGHLIN, a witness in behalf of the plaintiff, testified as follows:

Direct examination:

I live in Omaha. I am manager of the Continental Bak- [fol. 378] ing Company plant in Omaha. I have been engaged in the baking industry about twelve years with the Campbell Baking Company, Kansas City and St. Louis, Missouri, and Continental Baking Company, Omaha. I have been with the Omaha plant six years. I am familiar with the terminology of the baking industry. There is no technical word of the baking industry designating any kind of bread as fancy bread. The Continental Baking Company operates 100 plants scattered from Boston to Seattle and Los Angeles. Our bread is sold under the name of Wonder bread. At the Omaha plant, in addition to Wonder bread we make Betsy Ross and Merit bread. We manufacture a 20 ounce loaf of bread. I have examined our production sales records to determine the percentage of 20 ounce bread which we sell. One-third of the store bread which we manufacture and sell is in the 20 ounce size. We wrap the majority of this bread and the wrapper carries a label that the bread weighs one pound and a quarter. The loaf is sold and charged for as a pound and a quarter loaf. The food value of this loaf is as great in comparison to its weight as the other loaves of bread which our company manufactures. It is a wholesome article of diet, and if we are prevented from making it, our company would suffer great loss. This would necessitate the purchase of new pans, changes in our machinery, and would oblige us to buy new paper. We operate eight country routes from Omaha. Our [fol. 379] 20 ounce loaf is our best seller in the country.

The country prefers a larger loaf of bread than the 16 ounce loaf. In my opinion a 20 ounce loaf is an ideal loaf. It is more easily handled and is characteristically a better loaf. If we were prohibited from manufacturing this loaf of bread we would lose in volume of bread business. I heard part of the testimony of Milton Petersen as to the processes which were followed in the manufacture of a loaf of bread and the places where losses or gains in weight occur. That was an accurate statement of the methods pursued in our plant, except that we do not have traveling ovens. This is the same method pursed in other plants of the Continental Baking Company of which I know.

Cross-examination:

We have had some difficulty with the Iowa Weight Law. We have been warned at times that our scaling weight was slightly out of line, down or up. We have never been prosecuted for violating the law. We sell Wonder bread in 1¼ pound and 1½ pound sizes; [illegible]y Ross bread is sold in the same sizes, and Merit is only sold in a 12 ounce loaf. We wrap all three of these loaves. Our Wonder bread is our richest formula. We have been manufacturing the 20 ounce loaf as long as I have been in Omaha. We have pans of suitable size for the 1½ pound and 1½ pound loaves. I think the 20 ounce loaf is manufactured in other plants of [fol. 380] our organization. If we couldn't use the 20 ounce pans in Omaha we might ship them to some other plant where they could be used. It isn't done but I suppose it could be done as an extreme measure. Our wrapping paper could not be shipped to another plant as we have to have the name of the manufacturing plant on the wrapper, and we do that in Omaha; our paper reads Omaha, and the paper of the other plants shows the place where it is manufactured. We have ordered paper since this law was passed. We order paper each month. At the present time I would say we have about three months' supply of 20 ounce paper on hand. There is no standard size of families but there is an average size. The average size of a family is four. The average family will buy bread as of the size needed. The average size family will purchase the loaf which suits their family needs better than the smaller or larger loaf. A family of three or four people would buy the 20 ounce loaf. Some families eat more bread than others.

My company manufactures raisin bread. In the vernacular of the baking industry there is no such thing as fancy bread. Fancy, in my opinion, means a superior article, such as fancy groceries. If we make an article using ordinary ingredients we would not call it fancy bread. If we were unable to bake the 20 ounce loaf of bread customers would have to select between the 16 ounce and the 24 ounce loaf [fol. 381] of bread. Customers would rebel against it and would use other methods of getting what they wanted, probably bake their own bread, and there would be a decrease in our sales. The housewife buys bread because she can get what she wants; that is why we have the 20 ounce loaf. If the customer had part of the loaf of bread left, they might buy a smaller loaf; if they were going to have more people in, they would be compelled to buy a larger loaf. We endeavor to convince grocers that they should not sell our bread at less than cost.

We scale our dough at 23 to 26 ounces to produce a 20 ounce loaf. Our 20 ounce loaf today is scaled at about 24½ ounces. We change the scaling weight if the material is bought for less.

My company was formerly known as the Jay Burns Baking Company; and prepared some exhibits in one of the former bread weight cases. These were prepared by Mr. Burns and was prior to our taking over his plant. We have a man at the scaling machine to test the weight of the dough as it comes from the machine. If it is running a little strong we cut down the size of the pockets. We are vitally interested in knowing whether a loaf is being scaled wrong. There is only a slight variation between loaves coming from the machine at a given time but the two outer pockets can never be made to scale the same as the two in- [fol. 382] ner pockets in any dividing machine which I know of. We use fuel oil in our baking operations and get a uniform heat with that if our quality of oil is the same.

Redirect examination:

One-third of our total production is in 20 ounce bread which would be prohibited by this law. With regard to the exhibits offered in one of the previous cases these were made by Jay Burns and introduced in the Jay Burns Baking Company vs. Bryan case, which took place in 1921. Our company bought the plant in 1925. The function of the man

who operates the dividing machine is to control the piece of dough. He occasionally tests a piece of dough on an independent scale to see that it is correct. If he finds that a pocket is scaling too heavy he attempts to adjust it. The pieces of dough which have already passed through the machine and which are too heavy are placed back in the divider if they can be caught, but many loaves will pass through that have been overweight or underweight in spite of the best effort of the divider man, and will be baked with the loaves. Our shop records show the average scaling weights on the loaves for a day's manufacture but show nothing of the individual loaf.

My understanding of the definition for fancy bread is that it is something superior. The average baker uses about 5% milk in making bread. This is skim milk. If a baker [fol. 383] manufactures a loaf of white bread using whole milk, this would produce a loaf of superior bread and might be called fancy bread, if the dictionary term means superior. If that is true the Continental Baking Company manufacture fancy bread, and that would apply whether the same is white bread, graham bread, raisin bread, whole wheat bread or any other type of bread manufactured.

Recross-examination:

The dictionary defines fancy as superior. The average bread, I would say, was the general run. I have heard of fancy clothing and plain clothing, fancy cooking and plain cooking. I would say plain would be far from superior; at least it would not be superior. As a technical baker I know that we do not commonly use the term fancy as describing bread. I do not pretend to know what the public generally might call raisin breads and nut bread- but I think they usually call them raisin breads and nut breads.

Redirect examination:

I do know that when the statute says "provided the weights shall not apply to fancy bread" that it is uncertain and indefinite as to what it meant by the term "fancy bread."

[fol. 384] GEORGE MASCOTT, a witness in behalf of the plaintiff, testified as follows:

Direct examination:

I live in Omaha and am the cake sales manager of the P. F. Peterson Baking Company. I have been employed by that company for five years and have been a salesman for them, calling on retail grocery trade in the country, except for the last four months when I became cake sales manager. As country salesman I travelled extensively throughout the country towns of Nebraska and called on the retail merchants of those towns for the purpose of selling bread for my company. In this work I noticed the sizes of bread loaves displayed and sold by country merchants. I estimate that from 80 to 90% of the bread sold by country merchants was of the 20 ounce size. I inquired several times about this and the merchants told me that the 20 ounce loaf was the type of loaf they were selling and which is in demand. They tell me that the 20 ounce loaf is just about the right size for the farmer customers who used to buy two loaves for a quarter. The large cities such as Lincoln and Omaha do not sell as much 20 ounce bread as the country towns.

Cross-examination:

The 20 ounce loaf now retails at 10¢ and the country merchant sells two loaves for 20¢. The country merchant can [fol. 385] sell two 24 ounce loaves for a quarter now but his trade still demands the 20 ounce loaf. The farmer does not come to town every day and consequently does not buy bread every day, so buys at least two loaves at a time. I think at present prices the farmer is buying two 20 ounce loaves for 20¢ rather than two 24 ounce loaves for 25¢. A pound loaf of bread was too small for his family and the 20 ounce loaf is just about large enough. The farmer buys more than one 20 ounce loaf because he needs more bread and can save an extra penny by buying two loaves at a time. I do not think he would be satisfied with one 24 ounce loaf and one 16 ounce loaf as customers seldom buy two different size or shape loaves. If they cannot buy the loaf they want I think they would not buy a pound loaf of bread and a pound and one-half loaf. The country merchants use 30 or 40 loaves of bread per day. I think a majority of the people who live in the country buy bakers bread because it is better quality than home baked bread. Many young house-

wives never learned to bake bread but I think all farmers' wives know how to bake bread. The cost is not great in buying bread and I believe the housewife can buy her bread as cheap or cheaper than she can bake it herself.

Redirect examination:

More bakers bread is sold in the country communities during the summer months than in winter because during [fol. 386] the summer the farmers are busy harvesting and working in the fields and the housewife does not have time to bake bread. In the summer they have more help on the farms and consume more bread. A man works more and eats more in the summer.

P. F. Petersen, a witness in behalf of the plaintiff, testified as follows:

Direct examination:

I live in Omaha and am president of the P. F. Petersen Baking Company. I have been engaged in the baking industry in Omaha for 41 years. I learned my trade in Denmark 54 years ago, and have been continuously engaged in the baking industry, in Omaha for the past 41 years. I am familiar with the terminology of the baking industry as to different types of bread. The term "fancy bread" is not a technical term of the bread industry which applies to any particular type or kind of bread. The usual dictionary application of the word "fancy" mean- superior, and all of the bread we make, being of superior quality, might be termed fancy bread under the dictionary definition, and would not then be under the operation of the statutes.

Cross-examination:

I have heard of ginger bread. We do not make it, but I would not call it fancy bread. There is no technical term [fol. 387] in the baking industry such as fancy bread. I do not know what the public might call fancy bread or plain bread. In the manufacturing process while the dough is in the fermentation room, I would call that the fermentation process. The passage of this dough through the vari-

ous machines like the scaler and rounder and molder might be called the dividing and molding process. While the dough is in the proof box this would be called the proofing process, and after it gets into the oven this would be called the baking process. After it gets out of the oven it is cooled for a couple of hours, which is called the cooling process, and then the loaf is sent to the wrapping machine. If the Department of Agriculture rules that a loaf must be weighed within 12 hours after baking, I would interpret that as 12 hours after the baking process is complete. I do not object to a standard weight law which fixes minimum weights for bread. My objection is centered on the maximum tolerance feature of this law. I believe that a law which fixes a standard weight but does not hold the baker within a given range which is fixed by maximum tolerance could be obeyed by the baker. If the proper officer or department adopted rules for a 3 ounce excess tolerance and did not hold the baker responsible for the bread after it left his custody, and definitely defined what should constitute fancy bread, I would still object to the law if it contained a maximum tolerance feature. A three ounce tolerance would not be sufficient at all times. If the baker [fol. 388] is in the hands of the elements and state inspectors no one can tell the weight loaf he is going to get. If the law provided that the baker should not be responsible for the bread after it left his custody or control it would be less of a menace than it now is and than the 1927 law which held the baker responsible for bread weights after the bread got into the hands of the retailer, and after it had been shipped out of the State. Our own experience with the bread weight laws have been with the Smith laws which are the only ones we have ever had with maximums in this state.

Redirect examination:

I do not favor any bread weight law which would eliminate the 20 ounce loaf of bread because it is a very popular loaf in the country, one of our biggest sellers.

Recross-examination:

I testified in both of the previous cases in Nebraska. I do not know what the popular loaf was at the time of the previous cases, but I do know at the present time the 20

ounce loaf is a very popular loaf. I do not know how long we have been wrapping bread, it seems to me that some bread has been wrapped for 20 years. We are wrapping practically all of our bread except hearth breads.

[fol. 389] It is stipulated between counsel for the respective parties that Mr. P. F. Petersen did request the Omaha delegation of the Nebraska legislature to substitute in place of House Roll 51 a bill fixing only minimum weights and containing no provision for delegation of legislative authority; and it is further stipulated that Exhibits D, E, F, and G, being the monthly meteorological summaries of the Omaha Weather Bureau for May, June, July and August, 1931, may be accepted in evidence.

B. Sherman Whitney, a witness in behalf of the plaintiff, testified as follows:

Direct examination:

I live in Omaha, Nebraska, and am manager of the Schulze Baking Company plant in Omaha. My company operates 22 plants in the United States. I have been with that company a little over three years. I have been engaged in the baking industry approximately 24 years. I am familiar with the terminology and phraseology of the baking industry. The only meaning of the term fancy bread is to designate superior quality bread. Our best bread we term as a fancy or high grade bread, meaning that it is of different quality and better than other bread. It does not designate any particular kind of bread. Our [fol. 390] Omaha plant manufactures 20 ounce bread for sale in Nebraska. For every 1,000 loaves of one pound bread we manufacture we also manufacture approximately 930 loaves of 20 ounce bread for which we have sale. If this loaf were prohibited it would have a tendency to drive people to different loaves of bread and would result in a material loss in volume. I would say that we would be able to transfer 50% of our customers to other sizes of bread and about 50% of the 20 ounce bread users would be lost. If this loaf were eliminated we would have a very

decided loss in pans and paper. We have sale for the 20 ounce loaf both in Omaha and in rural communities. Its sale in Omaha has been increasing in proportion to other loaves.

Cross-examination:

I think that this 20 ounce loaf is selling better in towns exceeding 5,000 people. Most people buy bakery bread because they like it better and because of the work involved in baking their own bread. I see no similarity between the purchase of cigars and bread. A man might take a different size cigar than that to which he was accustomed, but if a 20 ounce loaf of bread meets the family's requirements and is sold at a price which they feel is fair, they would return to home baking rather than buy a 24 ounce loaf in which there would be wastage and stalage, nor [fol. 391] would they buy the one pound loaf which would not be enough. No one likes to purchase food which they cannot consume. It results in waste. It has taken years to ween people away from baking their own bread and to convince the public that they can buy better bread and get it cheaper from the bakers that they can bake it themselves. We do not consider that our bread would be touched by this law because it is fancy bread. The State authorities do not interpret our bread as fancy bread.

Redirect examination:

We use the same ingredients in manufacturing our 20 ounce loaf that we do in our 24 and 16 ounce loaves. It has the same ingredients and the same proportion in food value as the other loaves. It is a wholesome article of diet.

There is no manufacturing business, in my estimation, in which the competition is as keen as in the baking business.

[fol. 392] Joe Carr, a witness in behalf of the defendant, testified as follows:

Direct examination:

I am a baker living in Lincoln. I am president of the Nebraska Bakers Association. There is a term in bakers'

parlance such as fancy bread, which is any bread where there is nuts and raisins, cheese, colored breads; bread produced from anything like that, pertaining to that type of bread we class as fancy bread. We call white bread and graham bread plain breads. Plain breads are white bread, whole wheat bread, graham bread, rye bread. If I get an order for raisin bread I have to put sufficient raisins in it before I can call it raisin bread. If I get an order for cheese bread I have to put a certain amount of cheese in it. We bake lots of nut-date bread out of whole wheat dough, that is, the whole wheat dough is taken and nuts and dates added in sufficient quantity to make it a date-nut bread—enough dates and nuts so when you slice it you see dates and nuts in there.

In large shops ordinary breads are made by machines. In my shop—I have a little shop—it is all hand work. Fancy bread cannot be run in a machine. In large shops I have seen them run raisin bread through a divider but it would not run through a mixer. I operate the Acme Bakery in Lincoln.

[fol. 393] Cross-examination:

If I received an order for 100 loaves of fancy bread I could not supply it unless I received a further definition to let me know what they meant. Fancy bread does not mean any particular kind of loaf; any kind of loaf requiring extra handling or extra ingredients such as braided bread would be fancy bread.

Ordinary white bread as manufactured in this and other states usually has for its moisture content water or water with milk added. If the baker instead of using powdered milk or water were to use whole milk as moisture content that would make a different loaf than ordinary white bread, and I would class that as fancy white bread. If I added raisins to whole wheat dough I would call that fancy bread. My definition of fancy bread is any loaf of bread which has extra handling or extra ingredients and is different than the average. If the dictionary defines fancy to mean anything of superior grade or quality, I would say that applied to any bread of superior grade or quality and it should be called fancy bread. This loaf of Betsy Ross bread before me, manufactured by the Continental Baking Company in Omaha, I am not able to say whether it is fancy bread

or not. Just looking at it I would say it is a plain white loaf of bread. If, however, it has whole milk in it, I would call it fancy bread. The same is true of this Butternut bread before me manufactured by the Schulze Baking Company. Any loaf containing whole milk,, I would say, is [fol. 394] fancy bread. I could not tell from an examination of a loaf of bread off hand whether it was fancy bread or not, and if I received an order for fancy bread I could not supply the order without further information.

Redirect examination:

If I had an order for ordinary bread I would give them just ordinary bread. If somebody ordered bread they would not say "I want a loaf of ordinary bread"; they would walk in and say "I want a loaf of bread", but if they had something else in mind and said they wanted something better, they would bring out the point like fancy bread or bread made with whole milk. There is a large quantity of different kinds of fancy bread. The term is just a kind of generic term to cover extraordinary breads. I do not know the dictionary definition of the term fancy.

CARL EBNER, a witness in behalf of the defendant, testified as follows:

Direct examination:

I am a baker residing in Lincoln, connected with the Goodey Baking Company of Lincoln, Nebraska. There is a term in bakers' parlance such as fancy bread. What I would call fancy bread would be any loaf of bread into which there is an ingredient put which is higher price or any loaf of bread which takes more labor, that is, anything [fol. 395] with an additional labor cost or anything with an additional cost put into any particular loaf of bread; it would be a special bread of some kind. Other breads would be ordinary bread. The ordinary breads are those in regular sizes. We are mostly wholesalers so do not sell a lot of fancy bread ourselves. As to the price on fancy breads perhaps it is a little prohibitive.

Cross-examination:

We bake ordinary white bread. We do not use any special ingredients. If a customer orders a number of loaves of

fancy bread I would be unable to supply the order without further definition. I would not think a loaf of white bread could be fancy bread. I do not think the use of whole milk containing 9 per cent butter fats in distinction from those using no butter fats would be classed as fancy bread. If the price of whole milk was not excessive it would not be classed as fancy bread to my estimation. I would class whole wheat bread as ordinary bread. If a few raisins were added to it that would make it fancy bread, or a few nuts added would make it fancy bread. We make white bread with raisins in it. We use different white dough, with more sugar and more milk; it is the addition of the raisins and not the addition of the sugar and milk which makes it fancy bread. In my opinion, any loaf of bread which has ingredients different than the ordinary loaf of [fol. 396] bread or higher priced ingredients is a fancy loaf of bread, if used in great enough quantities. Addition of sugar would not make it fancy bread. My definition of fancy bread is any ingredient used in a loaf of bread which is not ordinarily used would make it fancy, or any extra labor or labor cost would make it a fancy loaf of bread. There may be a fancy white bread, a fancy whole wheat bread, a fancy raisin bread, a fancy graham bread—so that the term fancy bread does not mean any specific kind of bread to me. It is not the name of a definite type of bread. When the statute says "it shall not apply to fancy bread" it would become a matter for me to determine whether or not the bread is a fancy bread or not unless the law specified what was and what was not fancy bread.

Redirect examination:

I said fancy bread meant special as opposed to ordinary bread.

[fol. 397] EXHIBIT 1931-A

P. F. Petersen Baking Company

1930—Full year

Small	Sliced	20-ounce	Twin
2,450,670 loaves	76,311 loaves	1,639,100 loaves	1,024,820 loaves
2,450,670 pounds	76,311 pounds	2,048,875 pounds	1,537,230 pounds
$147,040.20 value	$5,341.77 value	$122,932.50 value	$92,233.80 value

1931—Jan. 1st to Sept. 1st

Small	Sliced	20-ounce	Twin
801,098 loaves	703,559 loaves	1,036,856 loaves	509,277 loaves
801,098 pounds	703,559 pounds	1,296,072 pounds	763,915 pounds
$48,065.88 value	$49, 249.13 value	$77,764.32 value	$45,834.90 value

Percentage of total white store bread volume in each size

1930—Small 40%
Sliced 1 2/3%
20-Oz. 33 1/3%
Twin 25%

100%

1931—Small 21.7%
Sliced 22.3%
20-Oz. 35.2%
Twin 20.8%

100%

[fol. 398]

PLAINTIFFS' EXHIBIT 1931 B—1

Manufacturer: P. F. Petersen Baking Co. Brand: Peter Pan. Date: 9-9-31

No.	Scaling Weight	Baked Weight	6 hr. Weight	12 hr. Weight	Loss	Condition where kept		Circulation of air	Wrapped
						Temperature	Humidity		
1	19½ oz.	17½ oz.	16¾ oz.	16½ oz.	1 oz.	92° to 95°	53 to 58%	Yes	Yes
2	19½ oz.	17½ oz.	16¾ oz.	16½ oz.	1 oz.	92° to 95°	53 to 58	Yes	Yes
3	19½ oz.	17½ oz.	17¼ oz.	16¾ oz.	¾ oz.	99°	93	No	Yes
4	19½ oz.	17½ oz.	17¼ oz.	16¾ oz.	¾ oz.	99°	93	No	Yes
5	19½ oz.	18 oz.	17 oz.	15¾ oz.	2¼ oz.	99° to 101°	22 to 38	Yes	Yes
6	19½ oz.	17¾ oz.	16¾ oz.	15¾ oz.	2 oz.	99° to 101°	22 to 38	Yes	Yes
7	19½ oz.	17¾ oz.	16½ oz.	15½ oz.	2¼ oz.	99° to 101°	22 to 38	Yes	Tes
8	19½ oz.	18 oz.	16½ oz.	15¾ oz.	2¼ oz.	99° to 101°	22 to 38	Yes	Yes
9	19½ oz.	17½ oz.	16½ oz.	15½ oz.	2 oz.	99° to 101°	22 to 38	Yes	Yes
10	19½ oz.	18¼ oz.	17 oz.	15½ oz.	2¾ oz.	99° to 101°	22 to 38	Yes	Yes

Manufacturer: P. F. Petersen Baking Company. Brand: Peter Pan Sliced. Date: 9-9-31

No.	Scaling Weight	Baked Weight	6 hr. Weight	12 hr. Weight	Loss	Condition where kept		Circulation of air	Wrapped
						Temperature	Humidity		
11	19½ oz.	17½ oz.	16¾ oz.	16½ oz.	1 oz.	92 to 95°	53 to 58%	Yes	Yes
12	19½ oz.	17½ oz.	16¾ oz.	16¼ oz.	1¼ oz.	92 to 95°	53 to 58%	Yes	Yes
13	19½ oz.	17¾ oz.	17¼ oz.	17 oz.	¾ oz.	99°	93%	No	Yes
14	19½ oz.	17¼ oz.	17 oz.	16¾ oz.	½ oz.	99°	93%	No	Yes
15	19½ oz.	18 oz.	16¾ oz.	15½ oz.	2½ oz.	99 to 101°	22 to 38%	Yes	Yes
16	19½ oz.	17¾ oz.	16½ oz.	15½ oz.	2¼ oz.	99 to 101°	22 to 38%	Yes	Yes
17	19½ oz.	17¼ oz.	15¾ oz.	15 oz.	2¼ oz.	99 to 101°	22 to 38%	Yes	Yes
18	19½ oz.	17¼ oz.	16¼ oz.	15¾ oz.	1½ oz.	99 to 101°	22 tg 38%	Yes	Yes
19	19½ oz.	17½ oz.	16½ oz.	15½ oz.	2 oz.	99 to 101°	22 to 38%	Yes	Yes
20	19½ oz.	17¾ oz.	16¾ oz.	15½ oz.	2¼ oz.	99 to 101°	22 to 38%	Yes	Yes

PLAINTIFFS' EXHIBIT 1931 B—2

Manufacturer: Continental Baking Co. Brand: Wonder. Date: 9-9-31

No.	Scaling Weight	Baked Weight	6 hr. Weight	12 hr. Weight	Loss	Condition where kept: Temperature Low High	Condition where kept: Humidity Low High	Circulation of air	Wrapped
1	20 oz.	17½ oz.	16¼ oz.	15½ oz.	2 oz.	99 to 101°	22 to 38%	Yes	Yes
2	20 oz.	18 oz.	16½ oz.	15¾ oz.	2¼ oz.	99 to 101°	22 to 38%	Yes	Yes
3	20 oz.	18¼ oz.	16¾ oz.	16 oz.	2¼ oz.	99 to 101°	22 to 38%	Yes	Yes
4	20 oz.	18 oz.	16¼ oz.	15½ oz.	2½ oz.	99 to 101°	22 to 38%	Yes	Yes
5	20 oz.	18 oz.	16¼ oz.	15½ oz.	2½ oz.	99 to 101°	22 to 38%	Yes	Yes
6	20 oz.	18¼ oz.	16¼ oz.	15¾ oz.	2½ oz.	99 to 101°	22 to 38%	Yes	Yes
7	20 oz.	18 oz.	16½ oz.	15½ oz.	2½ oz.	99 to 101°	22 to 38%	Yes	Yes
8	20 oz.	18 oz.	16¼ oz.	15¼ oz.	2¾ oz.	99 to 101°	22 to 38%	Yes	Yes

Manufacturer: Quaker Baking Company. Brand: Quaker. Date: 9-9-31

No.	Scaling Weight	Baked Weight	6 hr. Weight	12 hr. Weight	Loss	Condition where kept: Temperature Low High	Condition where kept: Humidity Low High	Circulation of air	Wrapped
1	20 oz.	17½ oz.	16 oz.	15¼ oz.	2¼ oz.	99 to 101°	22 to 38%	Yes	Yes
2	20 oz.	18½ oz.	17 oz.	16¼ oz.	2¼ oz.	99 to 101°	22 to 38%	Yes	Yes
3	20 oz.	17½ oz.	16 oz.	15½ oz.	2 oz.	99 to 101°	22 to 38%	Yes	Yes
4	20 oz.	18½ oz.	16½ oz.	16 oz.	2½ oz.	99 to 101°	22 to 38%	Yes	Yes
5	20 oz.	19 oz.	17 oz.	16 oz.	3 oz.	99 to 101°	22 to 38%	Yes	Yes
6	20 oz.	18 oz.	16½ oz.	15½ oz.	2½ oz.	99 to 101°	22 to 38%	Yes	Yes
7	20 oz.	17¼ oz.	15¾ oz.	15 oz.	2¼ oz.	99 to 101°	22 to 38%	Yes	Yes
8	20 oz.	19 oz.	17½ oz.	16¾ oz.	2¼ oz.	99 to 101°	22 to 38%	Yes	Yes
9	20 oz.	17½ oz.	16¼ oz.	15 oz.	2½ oz.	99 to 101°	22 to 38%	Yes	Yes
10	20 oz.	19¼ oz.	17¾ oz.	17 oz.	2¼ oz.	99 to 101°	22 to 38%	Yes	Yes

[fol. 400]

PLAINTIFFS' EXHIBIT 1931 B—3

Manufacturer: General Baking Co. Brand: Bond. Date: 9-10-31

No.	Scaling Weight	Baked Weight	6 hr. Weight	12 hr. Weight	Loss	Condition where kept: Temperature Low High	Condition where kept: Humidity Low High	Circulation of air	Wrapped
1	25 oz.	23 oz.	21 oz.	19½ oz.	3½ oz.	101 to 103°	22 to 36%	Yes	Yes
2	25 oz.	22½ oz.	20 oz.	19 oz.	2½ oz.	101 to 103°	22 to 36%	Yes	Yes
3	25 oz.	24 oz.	21½ oz.	20½ oz.	3½ oz.	101 to 103°	22 to 36%	Yes	Yes
4	25 oz.	24 oz.	22 oz.	21 oz.	3 oz.	101 to 103°	22 to 36%	Yes	Yes
5	25 oz.	23½ oz.	21 oz.	20 oz.	3½ oz.	101 to 103°	22 to 38%	Yes	Yes
6	25 oz.	24 oz.	22 oz.	20½ oz.	3½ oz.	101 to 103°	22 to 36%	Yes	Yes
7	25 oz.	23 oz.	21 oz.	20 oz.	3 oz.	101 to 103°	22 to 36%	Yes	Yes
8	25 oz.	23 oz.	20½ oz.	19½ oz.	3½ oz.	101 to 103°	22 to 36%	Yes	Yes
9	25 oz.	23¼ oz.	20½ oz.	19½ oz.	3¾ oz.	101 to 103°	22 to 36%	Yes	Yes
10	25 oz.	23 oz.	20½ oz.	19½ oz.	3½ oz.	101 to 103°	22 to 36%	Yes	Yes

Manufacturer: Schulze Baking Co. Brand: Butternut. Date 9-10-31

No.	Scaling Weight	Baked Weight	6 hr. Weight	12 hr. Weight	Loss	Condition where kept: Temperature Low High	Condition where kept: Humidity Low High	Circulation of air	Wrapped
1	20 oz.	18 oz.	16½ oz.	15½ oz.	2½ oz.	101 to 103°	22 to 36%	Yes	Yes
2	20 oz.	18½ oz.	17 oz.	16¼ oz.	2¼ oz.	101 to 103°	22 to 38%	Yes	Yes
3	20 oz.	18 oz.	17 oz.	16 oz.	2 oz.	101 to 103°	22 to 36%	Yes	Yes
4	20 oz.	18 oz.	16½ oz.	15½ oz.	2½ oz.	101 to 103°	22 to 36%	Yes	Yes
5	20 oz.	17½ oz.	15¾ oz.	15 oz.	2½ oz.	101 to 103°	22 to 36%	Yes	Yes
6	20 oz.	18½ oz.	17 oz.	16 oz.	2½ oz.	101 to 103°	22 to 36%	Yes	Yes
7	20 oz.	18 oz.	16¾ oz.	16 oz.	2 oz.	101 to 103°	22 to 36%	Yes	Yes
8	20 oz.	18 oz.	16½ oz.	15¾ oz.	2¼ oz.	101 to 103°	22 to 36%	Yes	Yes
9	20 oz.	18½ oz.	17 oz.	16 oz.	2½ oz.	101 to 103°	22 to 36%	Yes	Yes
10	20 oz.	18½ oz.	16¾ oz.	15¾ oz.	2¾ oz.	101 to 103°	22 to 36%	Yes	Yes

[fol. 401] PLAINTIFF'S EXHIBIT 1931C

Federal Law fixes 38% as maximum moisture content of loaf.

Computation of moisture and evaporation on 18 ounce loaf containing 38% moisture:

Solids	11.16
Moisture	6.84
Total weight	18.00 oz.

On evaporation of two ounces of moisture will be as follows:

Solids	11.16
Moisture	4.84
Total weight	16.00 oz.

By this process moisture content of loaf has been reduced from 38% to 30% and loaf still contains 71% of the total moisture permitted by law.

On 17½ ounce loaf at 38% moisture:

Solids	10.85 oz.
Moisture	6.65 oz.
Total weight	17.50 oz.

In evaporting 1½ ounce moisture, same will be as follows:

Solids	10.85 oz.
Moisture	5.15 oz.
Total weight	16.0 oz.

By this process the moisture content of a loaf is reduced from 38% to 32.2%, and loaf still contains 77% of the moisture permitted by law.

On 26.4 ounce loaf with 38% moisture:

Solids	16.37 oz.
Moisture	10.03 oz.
Total weight	26.4 oz.

In evaporating 2.4 ounces moisture loaf will contain:

Solids	16.37 oz.
Moisture	7.63 oz.
Total weight	24.0 oz.

In this evaporation moisture content reduced from 38% to 31.8% and loaf still contains 76% of the total moisture permitted by law.

Loaf containing 20% moisture considered a fresh and edible loaf.

(Here follows side folios 402, 403, 404 and 405)

[fol. 402]

PLAINTIFFS' EXHIBIT 1931-D

U. S. Department of Agriculture, Weather Bureau

Monthly Meteorological Summary

Station: Omaha, Nebr. 90th Meridian Time. Month: May, 1931

Date	Temperature (°F.) Thermometers over roof, 115 feet above ground: Extremes Max.	Extremes Min.	Mean	Departure from normal	Dry bulb 7 a. m.	Dry bulb Local noon	Dry bulb 7 p. m.	Moisture: Relative humidity, per cent 7 a. m.	Relative humidity, per cent Local noon	Relative humidity, per cent 7 p. m.	Vapor pressure, local noon	Precipitation, inches*: Total 7 a. m. to 7 p. m.	Total Mid. to mid.	Snowfall, unmelted 7 p. m. to 7 p. m.	Snowfall, unmelted Depth on ground 7 p. m.	Wind: Max. velocity, miles per hour	Wind: Direction of max. velocity	Per cent of sunshine†	River stage, feet	Date
1	78	53	66	+ 9	54	73	75	80	37	32	.298	....	....	0	0	10	w.	100	6.7	1
2	65	46	56	− 2	46	57	63	57	33	25	.157	....	....	0	0	20	n.	100	6.5	2
3	72	44	58	0	46	67	68	60	26	29	.180	....	....	0	0	9	sw.	100	6.6	3
4	76	49	62	+ 4	52	72	66	62	42	77	.234	.19	.68	0	0	19	n.	62	6.6	4
5	49	38	44	−15	39	44	45	98	62	60	.180	.01	.57	0	0	21	n.	4	6.8	5
6	55	33	44	−15	34	46	55	68	51	30	.157	.....	....	0	0	20	nw.	100	6.8	6
7	66	36	51	− 8	38	60	63	73	40	38	.211	....	....	0	0	14	n.	100	6.8	7
8	50	40	45	−15	41	48	45	63	52	86	.180	T.	.02	0	0	15	nw.	0	6.7	8
9	49	38	44	−16	39	48	45	94	73	94	.247	.10	.22	0	0	21	nw.	3	6.6	9
10	51	43	47	−13	44	47	48	92	83	87	.266	.01	.01	0	0	20	nw.	0	6.6	10
11	52	46	49	−12	47	48	52	94	92	74	.310	.04	.04	0	0	21	nw.	0	6.7	11
12	63	47	55	− 6	48	55	62	86	67	50	.287	....	T.	0	0	14	n.	93	6.7	12
13	73	48	60	− 2	50	68	70	77	36	33	.237	....	....	0	0	8	n.	94	6.8	13
14	79	53	66	+ 4	55	74	77	67	30	32	.256	....	....	0	0	6	sw.	100	6.9	14
15	87	58	72	+10	60	82	84	53	29	34	.322	....	....	0	0	14	s.	100	7.1	15
16	83	64	74	+12	64	74	80	64	40	31	.334	T.	T.	0	0	16	n.	77	7.2	16
17	92	61	76	+13	62	85	85	74	37	37	.448	....	T.	0	0	14	se.	88	7.3	17
18	75	53	64	+ 1	56	56	64	80	90	50	.387	.06	.13	0	0	23	n.	25	7.2	18
19	60	42	51	−12	51	57	50	59	41	44	.187	....	....	0	0	24	n.	67	7.4	19
20	56	37	46	−18	39	50	54	64	36	30	.130	.....	....	0	0	20	nw.	83	7.3	20
21	55	36	46	−18	38	52	53	69	36	34	.136	....	....	0	0	13	n.	71	7.2	21
22	68	40	54	−10	43	61	65	61	33	29	.172	....	....	0	0	8	sw.	97	7.0	22
23	73	50	62	− 3	52	67	71	64	29	39	.195	T.	T.	0	0	15	s.	82	6.9	23
24	89	58	74	+ 9	59	81	86	77	47	35	.517	....	....	0	0	10	n.	82	6.8	24
25	89	63	76	+11	64	83	87	41	21	20	.237	....	....	0	0	9	n.	97	6.7	25
26	90	67	78	+12	68	87	84	66	30	37	.387	....	....	0	0	17	s.	95	6.5	26
27	91	65	78	+12	72	87	86	70	42	46	.555	....	.02	0	0	29	nw.	95	6.4	27
28	65	57	61	− 5	57	59	58	92	94	99	.465	.71	1.49	0	0	14	n.	0	6.4	28
29	73	59	66	− 1	59	70	70	94	52	46	.373	....	.08	0	0	14	n.	54	6.9	29
30	72	55	64	− 3	55	65	70	64	37	26	.228	....	T.	0	0	20	n.	83	6.6	30
31	79	57	68	+ 1	58	75	77	58	39	37	.334	....	....	0	0	12	sw.	90	6.6	31
Mean	70.2	49.5	59.8	−2.6	51.4	64.5	66.4	71.6	47.0	45.8	.281	Total 1.12	Total 3.26	Total 0.0	..	..	....	69	6.8	
Normal	....	....	62.4	.....	....	....	....	74.4	....	54.4	....	....	3.77	0.0	..	..	...	63	9.7	

Barometer (Station)

Mean, inches	28.76		
Highest	29.16	date	22
Lowest	28.33	date	17

Temperature

Highest	92°	date	17
Lowest	33°	date	6
Greatest daily range	31°	date	24

Precipitation*

Greatest this month in 5 min., 0.16 date, 28; 10 min., 0.19 date, 28; 30 min., 0.34 date, 28; one hour, 0.45 date, 28; 24 hours, 1.51 date, 27-28.

Defic'y this month as compared with the normal	0.51
Accumulated defic'y since Jan. 1	3.20

Weather (Number of days)

Clear (scale 0 to 3)	16
Partly cloudy (scale 4 to 7)	7
Cloudy (scale 8 to 10)	8
With 0.01 inch or more precip	10
With 0.25 inch or more precip	3
Total sunshine, hours	310

Wind

Miscellaneous Phenomena (Dates of)

Thunderstorms	4, 17, 18, 27, 28, 29
Dense fog	0
Halos: Solar	16, 21
Lunar	24
Hail	0; Sleet 0
Frosts: Light	3, 20, 21, 22
Heavy	7

Barometer (Station)

Mean, inches			28.76
Highest	29.16	date	22
Lowest	28.33	date	17

Temperature

Highest	92°	date	17
Lowest	33°	date	6
Greatest daily range	31°	date	24
Least daily range	6°	date	11
Accumulated excess since Jan. 1			688°
Av'age daily excess since Jan. 1			4.6°

Precipitation*

Greatest this month in 5 min., 0.16 date, 28; 10 min., 0.19 date, 28; 30 min., 0.34 date, 28; one hour, 0.45 date, 28; 24 hours, 1.51 date, 27–28.

Defic'y this month as compared with the normal	0.51
Accumulated defic'y since Jan. 1	3.20
Greatest snowfall in 24 hours, 0.0 date,	

Weather (Number of days)

Clear (scale 0 to 3)	16
Partly cloudy (scale 4 to 7)	7
Cloudy (scale 8 to 10)	8
With 0.01 inch or more precip	10
With 0.25 inch or more precip	3
Total sunshine, hours	310

Wind

Total movement, miles	5946
Average hourly velocity	8.0
Prevailing direction	Northwest

Miscellaneous Phenomena (Dates of)

Thunderstorms	4, 17, 18, 27, 28, 29
Dense fog	0
Halos: Solar	16, 21
Lunar	24
Hail	0; Sleet 0
Frosts: Light	3, 20, 21, 22
Heavy	7
Killing	0

Comparative Data for this Month from the Records of Previous Years (1871 to 1930)

Temperature

Highest this month, 99°, date, 29, 1913
Lowest this month, -25°, date, 1, 1909

Precipitation*,‡

Greatest fall this month in—

5 minutes	0.42, date, 24, 1908
10 minutes	0.54, date, 24–25, 1903
15 minutes	0.59, date, 24–25, 1903
30 minutes	0.73, date, 28–29, 1914
1 hour	1.00, date, 12, 1908
2 hours	1.25, date, 25, 1915
24 hours	2.98, date, 8, 1883

Greatest snowfall in 24 hours this month since 1893 1.3, date, 3, 1907.

Greatest total snowfall this month since 1885, 1.3 in 1907.

Wind

Average hourly velocity, miles	9.0
Prevailing direction	S

Maximum velocity recorded for this month since 1873 41 miles from the north, date, 9, 1918.

Wind—Continued

Greatest average velocity for whole month 11.4 in 1882.

Weather

Average number days this month—

Clear	9
Partly cloudy	11
Cloudy	11
With 0.01 inch or more of precip	12
With 0.25 inch or more of precip	4

Greatest number of days this month with 0.01 inch or more of precipitation, 21 in 1877.

Frost

Average date last killing frost in spring, April 14.

Latest date last killing frost in spring, May 19, 1894.

Average date first killing frost in autumn, October 15.

Earliest date first killing frost in autumn, September 18, 1901.

Mean Temperature [T] and Total Precipitation [P] for this Month

Year	T	P	Year	T	P	Year	T	P
1871	..	2.73	1891	59	4.94	1911	66	2.70
1872	..	6.35	1892	**54**	8.43	1912	66	1.30
1873	58	5.59	1893	59	3.84	1913	63	5.27
1874	66	1.24	1894	65	0.61	1914	64	2.16
1875	63	4.25	1895	64	1.11	1915	59	6.05
1876	63	2.07	1896	67	9.51	1916	63	4.57
1877	61	8.62	1897	62	2.16	1917	58	3.85
1878	58	5.77	1898	61	4.33	1918	68	4.08
1879	67	5.53	1899	62	4.45	1919	62	1.70
1880	**70**	3.40	1900	66	2.24	1920	62	2.55
1881	68	7.94	1901	63	2.13	1921	66	3.18
1882	57	4.91	1902	66	2.88	1922	65	2.37
1883	58	**11.29**	1903	63	8.32	1923	61	2.50
1884	62	1.45	1904	62	4.86	1924	56	2.01
1885	60	4.43	1905	60	3.40	1925	61	**0.55**
1886	66	4.58	1906	63	2.50	1926	67	1.87
1887	67	1.39	1907	55	1.58	1927	61	1.36
1888	57	4.36	1908	61	6.65	1928	65	1.97
1889	62	2.67	1909	61	3.80	1929	61	2.02
1890	60	2.72	1910	57	2.23	1930	62	2.74

Highest and lowest figures in bold-faced type.
*"T" trace, amount too small to measure. ‡Amounts for 5 minutes to 2 hours are since 1903.
† Number hours possible sunshine: 1st, 14.0; 16th, 14.5; 31st, 14.9; for this month, 449.0.

M. V. Robins, Meteorologist.

[fol. 403]

PLAINTIFFS' EXHIBIT 1931-E

U. S. Department of Agriculture, Weather Bureau

Monthly Meteorological Summary

Station: Omaha, Nebr. 90th Meridian Time. Month: June, 1931

Date	Temperature (°F.) Thermometers over roof, 115 feet above ground. Extremes Max.	Extremes Min.	Mean	Departure from normal	Dry bulb 7 a. m.	Dry bulb Local noon	Dry bulb 7 p. m.	Moisture: Relative humidity, per cent 7 a. m.	Relative humidity, per cent Local noon	Relative humidity, per cent 7 p. m.	Vapor pressure local noon	Precipitation, inches*: Total 7 a. m. to 7 p. m.	Total Mid. to mid.	Snowfall, unmelted 7 p. m. to 7 p. m.	Snowfall, unmelted Depth on ground 7 p. m.	Wind Max. velocity, miles per hour	Wind Direction of max. velocity	Per cent of sunshine†	River stage, feet	Date
1	71	60	66	− 2	61	67	69	59	54	50	.360	T.	T.	0	0	15	se.	23	**6.5**	1
2	86	61	74	+ 6	63	81	84	69	52	45	.536	....	.16	0	0	15	sw.	81	8.3	2
3	94	68	81	+13	68	85	89	74	36	41	.432	....	....	0	0	19	nw.	82	8.7	3
4	87	69	78	+10	73	76	78	**53**	58	59	.536	....	....	0	0	24	n.	77	8.7	4
5	69	57	63	− 6	61	**60**	**60**	88	**98**	**93**	.499	**.84**	**2.68**	0	0	18	ne.	**0**	8.7	5
6	**68**	57	**82**	− 7	58	65	65	**91**	70	84	.432	T.	T.	0	0	20	nw.	13	8.5	6
7	74	**51**	**62**	− 7	**52**	65	72	72	48	43	**.298**	....	....	0	0	23	nw.	**100**	8.2	7
8	85	55	70	0	59	78	84	75	45	44	.448	....	....	0	0	9	se.	97	8.1	8
9	88	68	78	+ 8	69	83	81	60	46	54	.517	....	....	0	0	14	s.	89	8.0	9
10	85	70	78	+ 8	72	81	75	67	58	79	.638	.08	.08	0	0	12	se.	66	8.0	10
11	79	66	72	+ 1	68	75	72	73	52	76	.465	T.	.31	0	0	11	se.	68	7.9	11
12	82	65	74	+ 3	66	77	81	87	59	46	.555	....	.03	0	0	19	nw.	62	8.0	12
13	87	66	76	+ 5	68	82	84	68	45	49	.482	T.	T.	0	0	**7**	e.	70	8.1	13
14	86	70	78	+ 7	71	83	80	79	56	59	.638	....	....	0	0	9	e.	48	8.0	14
15	87	64	76	+ 4	66	82	84	79	48	41	.517	....	1.36	0	0	16	se.	80	8.1	15
16	87	68	78	+ 6	70	84	84	75	48	49	.555	....	....	0	0	8	e.	99	9.0	16
17	88	70	79	+ 7	72	84	86	79	57	53	.684	....	....	0	0	13	s.	99	10.6	17
18	93	73	83	+11	74	88	90	76	54	51	.707	....	....	0	0	13	s.	**100**	**10.8**	18
19	95	75	85	+12	76	90	92	70	51	50	**.732**	....	....	0	0	13	se.	97	10.2	19
20	90	64	77	+ 4	70	84	68	78	58	89	.684	.39	.43	0	0	**38**	nw.	52	10.1	20
21	87	68	78	+ 5	68	79	85	87	63	67	.638	T.	T.	0	0	14	se.	58	10.7	21
22	96	76	86	+12	77	89	91	64	50	46	.684	T.	.01	0	0	11	sw.	83	10.4	22
23	100	77	88	+14	77	92	97	64	42	36	.616	....	....	0	0	11	s.	81	10.6	23
24	100	77	88	+14	80	95	96	54	32	36	.536	....	....	0	0	12	se.	**100**	10.7	24
25	101	79	90	+16	80	**97**	97	60	**31**	31	.536	....	....	0	0	9	s.	99	10.2	25
26	98	79	88	+14	81	95	94	58	37	41	.638	....	....	0	0	12	se.	99	10.1	26
27	101	79	90	+15	81	96	96	63	33	37	.555	....	....	0	0	10	se.	99	10.1	27
28	**102**	**82**	**92**	**+17**	**84**	**97**	96	57	34	40	.595	....	....	0	0	11	sw.	**100**	10.1	28
29	100	80	90	+15	83	95	94	56	36	44	.616	....	....	0	0	12	se.	**100**	10.0	29
30	100	81	90	+15	83	96	**98**	54	**31**	30	.517	....	....	0	0	12	sw.	99	9.8	30
31																				31
—												Total	Total	Total						—
Mean	88.9	69.2	79.0	+ 7.4	71.0	83.5	84.2	69.6	49.4	52.1	.555	1.31	4.96	0.0	..	..	...	77	9.2	
Normal	....	....	71.6	.....	....	....	....	77.4	....	56.4	....	....	4.56	0.0	..	..	...	69	12.4	

Barometer (Station)

Mean, inches.....28.73
Highest.....28.97 date..... 15
Lowest.....28.42 date..... 9

Temperature

Highest.....102° date..... 28
Lowest..... 51° date..... 7
Greatest daily range. 30° date..... 8
Least daily range.... 11° date..... 1
Accumulated excess since Jan. 1, 908°
Av'age daily excess since Jan. 1, 5.0°

Precipitation*

Greatest this month in 5 min., 0.53 date, 15; 10 min., 0.92 date, 15; 30 min., 1.30 date, 15; one hour 1.48 date, 5; 24 hours, 2.68 date, 5

Excess this month as compared with the normal.....0.40
Accumulated defic'y since Jan. 1,.....2.80
Greatest snowfall in 24 hours, 0.0 date, ..

Weather (Number of days)

Clear (scale 0 to 3)..... 18
Partly cloudy (scale 4 to 7)..... 6
Cloudy (scale 8 to 10)..... 6
With 0.01 inch or more precip..... 8
With 0.25 inch or more precip..... 3
Total sunshine, hours..... 350

Wind

Total movement, miles.....4565
Average hourly velocity..... 6.3
Prevailing direction..... South

Miscellaneous Phenomena (Dates of)

Thunderstorms.....2, 5, 6, 14, 15, 20, 22
Dense fog..... 0
Halos: Solar..... 0
Lunar..... 0
Hail..... 5; Sleet..... 0
Frosts: Light..... 0
Heavy..... 0
Killing..... 0

Mean, inches.....28, 73
Highest.....28.97 date..... 15
Lowest.....28.42 date..... 9

Temperature

Highest.....102° date..... 28
Lowest..... 51° date..... 7
Greatest daily range. 30° date..... 8
Least daily range.... 11° date..... 1
Accumulated excess since Jan. 1, 908°
Av'age daily excess since Jan. 1, 5.0°

Greatest this month in 5 min., 0.53 date, 15; 10 min., 0.92 date, 15; 30 min., 1.30 date, 15; one hour 1.48 date, 5; 24 hours, 2.68 date, 5

Excess this month as compared with the normal.....0.40
Accumulated defic'y since Jan. 1,.....2.80
Greatest snowfall in 24 hours, 0.0 date, ..

[illegible]
Partly cloudy (scale 4 to 7)..... 6
Cloudy (scale 8 to 10)..... 6
With 0.01 inch or more precip..... 8
With 0.25 inch or more precip..... 3
Total sunshine, hours..... 350

Wind

Total movement, miles.....4565
Average hourly velocity..... 6.3
Prevailing direction.....South

Thunderstorms.....2, 5, 6, 14, 15, 20, 22
Dense fog..... 0
Halos: Solar..... 9
Lunar..... 0
Hail..... 5; Sleet..... 0
Frosts: Light..... 0
Heavy..... 0
Killing..... 0

Comparative Data for this Month from the Records of Previous Years (1871 to 1930)

Temperature

Highest this month, 105° date, 16, 1918
Lowest this month, 42° date, 9, 1877

Precipitation*,‡

Greatest fall this month in—

5 minutes.....0.57, date, 13, 1925
10 minutes.....0.74, date, 13, 1925
15 minutes.....0.95, date, 16, 1928
30 minutes.....1.63, date, 16, 1928
1 hour.....2.25, date, 10, 1924
2 hours.....2.61, date, 23, 1925
24 hours.....5.02, date, 17, 1875

Greatest snowfall in 24 hours this month since 1893, 0.0 date, .., ...
Greatest total snowfall this month since 1885, 0.0 in ....

Wind

Average hourly velocity, miles..... 7.8
Prevailing direction..... se.
Maximum velocity recorded for this month since 1873, 49 miles from the n., date, 16, 1875; 49 nw., 5, 1880.

Wind—Continued

Greatest average velocity for whole month 10.5 in 1888.

Weather

Average number days this month—
Clear..... 10
Partly cloudy..... 12
Cloudy..... 8
With 0.01 inch or more of precip..... 11
With 0.25 inch or more of precip..... 5
Greatest number of days this month with 0.01 inch or more of precipitation, 19 in 1877 and 1908.

Frost

Average date last killing frost in spring, April 14.
Latest date last killing frost in spring, May 19, 1894.
Average date first killing frost in autumn, October 15.
Earliest date first killing frost in autumn, September 18, 1901.

Mean Temperature [T] and total Precipitation [P] for this Month

Year	T	P	Year	T	P	Year	T	P
1871	..	2.65	1891	69	6.66	1911	**79**	0.94
1872	..	3.91	1892	71	1.51	1912	69	3.09
1873	74	5.86	1893	73	7.11	1913	74	2.28
1874	72	6.93	1894	74	4.74	1914	75	7.01
1875	72	10.95	1895	70	4.31	1915	68	2.83
1876	**66**	3.47	1896	72	1.90	1916	68	2.58
1877	69	8.36	1897	72	1.43	1917	70	6.19
1878	68	8.48	1898	74	5.16	1918	76	1.80
1879	72	4.09	1899	72	5.77	1919	73	4.44
1880	73	3.14	1900	73	3.07	1920	73	2.62
1881	75	5.56	1901	75	5.31	1921	77	3.57
1882	71	12.05	1902	67	7.32	1922	76	2.68
1883	69	**12.70**	1903	68	1.31	1923	72	6.00
1884	73	6.11	1904	69	3.11	1924	69	9.08
1885	72	2.67	1905	72	1.70	1925	74	7.42
1886	71	1.50	1906	70	5.30	1926	71	2.01
1887	73	4.56	1907	69	4.69	1927	70	1.27
1888	70	3.86	1908	69	8.72	1928	67	5.20
1889	70	5.44	1909	70	7.54	1929	71	2.94
1890	74	5.04	1910	73	**0.43**	1930	72	1.56

Highest and lowest figures in bold face type.
* "T" trace, amount too small to measure. ‡Amounts for 5 minutes to 2 hours are since 1903.
† Number hours possible sunshine: 1st, 14.9; 16th, 15.1; 30th, 15.1; for this month, 452.0.

M. V. Robins,
Meteorologist.

[fol. 404]

PLAINTIFFS' EXHIBIT 1931-F

U. S. Department of Agriculture, Weather Bureau

Monthly Meteorological Summary

Station: Omaha, Nebr. 90th Meridian Time. Month: July, 1931

Date	Temperature (°F.) Thermometers over roof, 115 feet above ground: Extremes Max.	Extremes Min.	Mean	Departure from normal	Dry bulb 7 a. m.	Dry bulb Local noon	Dry bulb 7 p. m.	Moisture: Relative humidity, per cent 7 a. m.	Relative humidity, per cent Local noon	Relative humidity, per cent 7 p. m.	Vapor pressure local noon	Precipitation, inches*: Total 7 a. m. to 7 p. m.	Total Mid. to mid.	Snowfall, unmelted 7 p. m. to 7 p. m.	Snowfall, unmelted Depth on ground 7 p. m.	Wind: Max. velocity, miles per hour	Wind: Direction of max. velocity	Per cent of sunshine†	River stage, feet	Date
1	95	70	82	+ 7	84	84	73	54	59	88	.684	1.50	1.50	0	0	21	nw.	42	9.6	1
2	86	69	78	+ 2	72	81	84	84	58	36	.616	....	....	0	0	16	n.	90	9.7	2
3	87	68	78	+ 2	69	82	85	59	57	55	.638	....	....	0	0	12	ne.	98	9.4	3
4	78	60	69	− 7	70	66	63	65	85	93	.536	.22	.22	0	0	18	nw.	1	9.4	4
5	82	57	70	− 6	59	73	80	72	39	38	.322	....	....	0	0	14	nw.	100	9.5	5
6	79	66	72	− 4	68	76	78	57	51	40	.448	....	....	0	0	16	n.	97	9.5	6
7	80	62	71	− 5	65	77	78	43	28	28	.256	....	....	0	0	15	nw.	98	9.4	7
8	75	61	68	− 8	63	66	75	73	71	45	.448	T.	T.	0	0	22	nw.	33	9.6	8
9	86	61	74	− 2	66	82	84	65	32	30	.347	....	T.	0	0	18	nw.	88	9.5	9
10	87	66	76	0	67	82	85	63	38	36	.417	....	.02	0	0	11	e.	87	9.0	10
11	84	65	74	− 3	65	76	81	71	60	54	.555	T.	T.	0	0	18	s.	40	8.7	11
12	84	64	74	− 3	72	81	70	72	55	82	.595	.13	.13	0	0	14	e.	56	8.6	12
13	87	60	74	− 3	64	80	86	81	62	59	.638	....	....	0	0	9	e.	100	8.8	13
14	99	76	88	+ 11	77	93	94	65	42	44	.638	....	....	0	0	12	sw.	99	8.9	14
15	96	77	86	+ 9	78	92	93	58	40	41	.595	....	....	0	0	13	s.	100	8.4	15
16	96	78	87	+ 10	79	90	91	65	50	48	.707	....	....	0	0	11	sw.	99	8.3	16
17	91	72	82	+ 5	79	83	89	66	58	47	.638	.07	.07	0	0	19	n.	55	8.1	17
18	96	75	86	+ 9	76	91	93	59	47	42	.684	....	T.	0	0	9	se.	100	8.0	18
19	95	74	84	+ 7	77	93	77	79	45	71	.707	.16	.16	0	0	14	nw.	69	8.0	19
20	86	69	78	+ 1	69	81	85	67	38	32	.402	....	....	0	0	11	n.	100	7.8	20
21	97	70	84	+ 7	72	92	94	56	31	21	.482	....	....	0	0	10	sw.	100	7.4	21
22	93	77	85	+ 8	80	91	89	52	42	51	.616	T.	T.	0	0	10	ne.	78	7.2	22
23	87	72	80	+ 3	73	84	85	46	31	28	.360	....	T.	0	0	14	ne.	100	7.1	23
24	92	67	80	+ 3	70	84	89	51	27	23	.310	....	....	0	0	8	n.	100	7.0	24
25	93	71	82	+ 5	72	87	91	63	38	38	.482	....	....	0	0	12	se.	100	7.0	25
26	95	75	85	+ 8	76	92	92	77	42	41	.616	....	....	0	0	12	s.	100	6.9	26
27	97	77	87	+ 10	78	93	95	71	46	45	.707	....	....	0	0	12	s.	100	6.7	27
28	105	81	93	+ 16	82	102	100	47	19	23	.402	T.	T.	0	0	14	sw.	75	6.6	28
29	100	82	91	+ 14	82	93	95	29	28	34	.432	....	....	0	0	8	n.	92	6.4	29
30	100	77	88	+ 11	79	94	95	52	35	32	.575	....	....	0	0	10	s.	100	6.3	30
31	97	77	87	+ 10	80	93	84	63	45	44	.684	T.	T.	....	....	15	sw.	62	6.1	31
Mean	90.5	70.2	80.4	+ 3.7	73.0	85.0	85.6	62.1	45.1	44.8	.533	Total 2.08	Total 2.10	Total 0.0	....	..	....	82	8.2	
Normal	....	....	76.7	.....	....	....	....	75.7	....	53.8	....	....	3.54	0.0	....	..	....	75	11.8	

Barometer (Station)

Mean, inches	28.74		
Highest	29.03	date	9
Lowest	28.46	date	22

Temperature

Highest	105°	date	28
Lowest	57°	date	5
Greatest daily range	27°	date	21
Least daily range	13°	date	6
Accumulated excess since Jan. 1	1025°		
Av'age daily excess since Jan. 1	4.8°		

Precipitation*

Greatest this month in 5 min., 0.38 date, 1; 10 min., 0.61 date, 1; 30 min., 1.10 date, 1; one hour, 1.22 date, 1; 24 hours, 1.50 date, 1.

Defic'y this month as compared with the normal	1.44
Accumulated defic'y since Jan. 1	4.24
Greatest snowfall in 24 hours, 0.0 date, ..	

Weather (Number of days)

Clear (scale 0 to 3)	20
Partly cloudy (scale 4 to 7)	7
Cloudy (scale 8 to 10)	4
With 0.01 inch or more precip	6
With 0.25 inch or more precip	1
Total sunshine, hours	378

Wind

Total movement, miles	4134
Average hourly velocity	5.6
Prevailing direction	South

Miscellaneous Phenomena

(Dates of)

Thunderstorms	1, 12, 17, 18, 19, 22, 23, 31
Dense fog	0
Halos: Solar	0
Lunar	0
Hail	11 Sleet 0
Frosts: Light	0
Heavy	0
Killing	0

Barometer (Station)

Mean, inches			28.74
Highest	29.03	date	9
Lowest	28.46	date	22

Temperature

Highest	105°	date	28
Lowest	57°	date	5
Greatest daily range	27°	date	21
Least daily range	13°	date	6
Accumulated excess since Jan. 1,			1025°
Av'age daily excess since Jan. 1,			4.8°

Precipitation

Greatest this month in 5 min., 0.38 date, 1; 10 min., 0.61 date, 1; 30 min., 1.10 date, 1; one hour, 1.22 date, 1; 24 hours, 1.50 date, 1.

Defic'y this month as compared with the normal	1.44
Accumulated defic'y since Jan. 1	4.24

Greatest snowfall in 24 hours, 0.0 date, ..

Weather (Number of days)

Clear (scale 0 to 3)	20
Partly cloudy (scale 4 to 7)	7
Cloudy (scale 8 to 10)	4
With 0.01 inch or more precip	6
With 0.25 inch or more precip	1
Total sunshine, hours	378

Wind

Total movement, miles	4134
Average hourly velocity	5.6
Prevailing direction	South

Miscellaneous Phenomena

(Dates of)

Thunderstorms	1, 12, 17, 18, 19, 22, 23, 31		
Dense fog			0
Halos: Solar			0
Lunar			0
Hail	11	Sleet	0
Frosts: Light			0
Heavy			0
Killing			0

Comparative Data for this Month from the Records of Previous Years (1871 to 1930)

Temperature

Highest this month, 109° date, 27, 1930
Lowest this month, 50° date, 9, 1895

Precipitation*,‡

Greatest fall this month in—		
5 minutes	0.47, date,	18, 1915
10 minutes	0.70, date,	18, 1915
15 minutes	0.85, date,	3, 1921
30 minutes	1.11, date,	3, 1921
1 hour	1.63, date,	19–20, 1928
2 hours	1.97, date,	19–20, 1928
24 hours	4.35, date,	29, 1871

Greatest snowfall in 24 hours this month since 1893, 0.0 date, .., ...
Greatest total snowfall this month since 1885, 0.0 in ....

Wind

Average hourly velocity, miles	6.8
Prevailing direction	se.

Maximum velocity recorded for this month since 1873 52 miles from the ne., date 13, 1905.

Wind—Continued

Greatest average velocity for whole month 85 in 1890.

Weather

Average number days this month—	
Clear	14
Partly cloudy	12
Cloudy	5
With 0.01 inch or more of precip	9
With 0.25 inch or more of precip	4

Greatest number of days this month with 0.01 inch or more of precipitation, 18 in 1915.

Frost

Average date last killing frost in spring, April 14.
Latest date last killing frost in spring, May 19, 1894.
Average date first killing frost in autumn, October 15.
Earliest date first killing frost in autumn, September 18, 1901.

Mean Temperature [T] and Total Precipitation [P] for this Month

Year	T	P	Year	T	P	Year	T	P
1871	..	9.89	1891	71	3.54	1911	79	1.08
1872	..	6.36	1892	76	3.64	1912	78	1.78
1873	75	4.24	1893	77	3.03	1913	80	1.92
1874	80	0.54	1894	77	0.61	1914	79	1.09
1875	74	10.01	1895	74	1.38	1915	71	7.75
1876	75	7.30	1896	75	4.53	1916	83	**0.45**
1877	75	0.96	1897	79	2.01	1917	79	0.78
1878	78	7.66	1898	75	4.20	1918	77	1.76
1879	78	3.17	1899	75	1.73	1919	82	0.63
1880	77	5.36	1900	76	6.86	1920	76	3.91
1881	79	5.89	1901	**85**	2.98	1921	80	4.99
1882	71	6.76	1902	75	7.28	1922	74	5.60
1883	77	4.79	1903	76	2.67	1923	77	0.86
1884	75	**10.35**	1904	73	3.15	1924	73	2.79
1885	78	9.24	1905	73	2.36	1925	78	**0.45**
1886	78	0.69	1906	73	2.85	1926	78	3.13
1887	77	2.02	1907	76	6.45	1927	77	2.92
1888	79	2.56	1908	74	2.47	1928	77	6.55
1889	75	4.94	1909	76	4.40	1929	77	5.04
1890	79	3.74	1910	78	1.90	1930	**83**	1.03

Highest and lowest figures in bold face type.
* "T" trace, amount too small to measure. ‡ Amounts for 5 minutes to 2 hours are since 1903.
† Number hours possible sunshine: 1st, 15.1; 16th, 14.8; 31st, 14.4; for this month, 458.3.

M. V. Robins, Meteorologist.

[fol. 405]

PLAINTIFFS' EXHIBIT 1931-G

U. S. Department of Agriculture, Weather Bureau

Monthly Meteorological Summary

Station: Omaha, Nebr. 90th Meridian Time. Month: August, 1931

Date	Temperature (°F.) Thermometers over roof, 115 feet above ground: Extremes Max.	Extremes Min.	Mean	Departure from normal	Dry bulb 7 a. m.	Dry bulb Local noon	Dry bulb 7 p. m.	Moisture: Relative humidity, per cent 7 a. m.	Relative humidity, per cent Local noon	Relative humidity, per cent 7 p. m.	Vapor pressure local noon	Precipitation, inches*: Total 7 a. m. to 7 p. m.	Total Mid. to mid.	Snowfall, unmelted 7 p. m. to 7 p. m.	Snowfall, unmelted Depth on ground 7 p. m.	Wind: Max. velocity, miles per hour	Direction of max. velocity	Per cent of sunshine†	River stage, feet	Date
1	90	68	79	+ 2	74	84	73	73	63	91	.732	.27	.30	0	0	14	se.	35	6.0	1
2	84	67	76	0	67	76	83	81	51	42	.465	....	....	0	0	12	nw.	70	6.0	2
3	91	68	80	+ 4	69	87	89	74	39	34	.499	....	....	0	0	12	sw.	96	6.2	3
4	91	72	82	+ 6	73	89	87	73	46	51	.616	....	....	0	0	13	se.	100	5.9	4
5	92	72	82	+ 6	73	88	88	84	55	53	.732	....	....	0	0	8	e.	88	5.6	5
6	92	71	82	+ 6	74	88	89	78	46	46	.616	....	....	0	0	10	e.	97	5.6	6
7	91	74	82	+ 6	76	83	87	81	70	60	.783	.02	.02	0	0	9	se.	33	5.5	7
8	85	72	78	+ 2	72	81	82	95	72	71	.757	.12	1.02	0	0	12	sw.	11	5.6	8
9	78	67	72	− 4	71	71	77	84	74	44	.575	.03	.03	0	0	18	n.	32	5.5	9
10	70	59	64	− 12	59	68	67	66	52	50	.347	....	....	0	0	20	nw.	78	5.6	10
11	77	53	65	− 10	55	70	73	82	40	32	.287	....	....	0	0	10	ne.	100	5.8	1
12	79	57	68	− 7	59	75	75	68	33	38	.287	....	....	0	0	10	s.	100	5.7	12
13	82	60	71	− 4	61	77	76	62	42	48	.402	....	....	0	0	14	s.	91	5.4	13
14	88	63	76	+ 1	64	83	83	64	45	53	.499	....	....	0	0	13	se.	88	5.4	14
15	90	68	79	+ 4	69	87	84	66	37	41	.482	....	....	0	0	12	s.	99	5.6	15
16	87	68	78	+ 3	70	84	84	61	35	48	.417	....	....	0	0	10	s.	96	5.7	16
17	91	68	80	+ 6	69	84	82	83	52	59	.616	T.	T.	0	0	8	e.	44	5.7	17
18	89	66	78	+ 4	71	84	67	84	51	92	.595	.14	.20	0	0	31	ne.	49	5.5	18
19	86	64	75	+ 1	65	82	84	87	53	52	.575	....	....	0	0	7	e.	99	5.4	19
20	86	68	77	+ 3	69	83	80	77	52	51	.575	....	....	0	0	9	e.	97	5.2	20
21	85	63	74	0	66	82	79	73	40	45	.432	....	....	0	0	8	e.	94	5.2	21
22	86	63	74	+ 1	66	82	81	60	40	38	.432	....	....	0	0	9	se.	100	5.2	22
23	92	66	79	+ 6	66	87	72	68	39	86	.499	.09	.09	0	0	13	nw.	74	5.2	23
24	85	66	76	+ 3	67	78	80	80	51	40	.499	....	.09	0	0	14	nw.	73	5.5	24
25	83	62	72	− 1	63	78	96	95	56	74	.536	.27	.56	0	0	16	s.	49	6.0	25
26	86	64	75	+ 2	65	82	82	84	58	57	.638	....	....	0	0	10	s.	100	6.5	26
27	83	67	75	+ 3	72	76	77	81	67	30	.595	T.	T.	0	0	17	nw.	61	6.6	27
28	77	57	67	− 5	58	72	73	51	22	18	.164	....	....	0	0	20	nw.	100	6.6	28
29	88	55	72	0	58	82	85	50	21	23	.228	....	....	0	0	11	sw.	97	6.5	29
30	86	60	73	+ 1	60	79	83	55	41	55	.402	....	....	0	0	14	e.	98	6.5	30
31	86	66	76	+ 5	70	80	70	83	68	96	.707	1.29	2.12	0	0	32	nw.	33	6.6	31
Mean	85.7	65.0	75.4	+1.0	66.9	80.8	79.5	74.3	48.7	52.2	.516	Total 2.23	Total 4.43	Total 0.0	...	...	...	77	5.8	
Normal	....	....	74.4	.....	....	....	....	78.6	....	57.1	....	....	3.05	0.0	...	..	...	68	9.1	

Barometer (Station)

Mean, inches.....28.86
Highest.....29.12 date..... 11
Lowest.....28.50 date..... 31

Temperature

Highest..... 92° date..... 23
Lowest..... 53° date..... 11
Greatest daily range. 33° date..... 29
Least daily range.... 11° date..... 9
Accumulated excess since Jan. 1, 1057°
Av'age daily excess since Jan. 1, 4.3°

Precipitation*

Greatest this month in 5 min., 0.36 date, 31; 10 min., 0.65 date, 31; 30 min., 1.16 date, 31; one hour 1.17 date, 31; 24 hours, 2.12 date, 31
Excess this month as compared with the normal.....1.38
Accumulated defic'y since Jan. 1.....2.6
Greatest snowfall in 24 hours, 0.0 date, ..

Weather (Number of days)

Clear (scale 0 to 3)..... 17
Partly cloudy (scale 4 to 7)..... 9
Cloudy (scale 8 to 10)..... 5
With 0.01 inch or more precip..... 9
With 0.25 inch or more precip..... 4
Total sunshine, hours..... 327

Wind

Total movement, miles.....3913
Average hourly velocity..... 5.3
Prevailing direction.....South

Miscellaneous Phenomena

(Dates of)

Thunderstorms....1, 8, 17, 18, 23, 25, 26, 31
Dense fog..... 0
Halos: Solar..... 0
Lunar..... 0
Hail..... 31 Sleet..... 0
Frosts: Light..... 0
Heavy..... 0
Killing..... 0

| | | |

[fol. 406] STATE OF NEBRASKA,
County of Douglas, ss:

I, Sidney M. Smith, a Notary Public of the County of Douglas and State of Nebraska, do hereby certify that Milton Petersen, Ralph R. Smith, R. A. Laughlin, George J. Mascott, P. F. Petersen and Sherman B. Whitney were by me first severally duly sworn to testify the truth, the whole truth and nothing but the truth, and that the depositions by them respectively as above set forth, were reduced to writing by myself, in the presence of the witnesses respectively; that the foregoing exhibits are the exhibits (or true copies thereof) offered in evidence by Plaintiffs as set forth in said depositions; that the signatures of the witnesses to said depositions are waived by stipulation of counsel for the respective parties; that said depositions were taken at the time and place in the annexed agreement specified; that I am not counsel, attorney or relative of any of the parties, or otherwise interested in the event of this suit.

In testimony whereof I have hereunto set my hand and affixed my seal of office this 15th day of October, 1931.

Sidney M. Smith, Notary Public. (Seal of Sidney M. Smith, Douglas County, Nebraska. Commission expires Mch. 16, 1934.)

[fol. 407] IN DISTRICT COURT OF LANCASTER COUNTY

[Title omitted]

ORDER SETTLING BILL OF EXCEPTIONS

The plaintiffs herein having within the time heretofore allowed by the court for that purpose, reduced to writing this proposed bill of exceptions, all of the evidence and testimony adduced or offered on the trial of the above mentioned cause; all of the objections to the admission of said evidence and testimony with the grounds therefore; all of the rulings of the Court on such objections, together with all of the exceptions to such rulings made and taken at the time, and having served the same upon the attorneys for the defendants for examination and amendment, as required by law, and the same being now here before me,

the undersigned judge before whom said cause was tried, on motion of the attorneys for the plaintiffs that the same may be settled, allowed, signed, sealed and made a part of the record in said cause in said Court.

Now, therefore, I do hereby certify that this Bill of Exceptions contains all of the evidence and testimony adduced or offered on the trial of said cause; all of the objections thereto, with the grounds therefor; all the rulings of the Court on such objections, together with all of the exceptions to such rulings made and taken at the time;

And I do hereby order that said Bill of Exceptions be now settled, *settled*, signed, sealed and made a part of the record in said cause in said Court.

Done at Lincoln, Nebraska, this 29 day of March A. D. 1932.

J. H. Broady, Judge.

[fol. 408] Clerk's certificate to foregoing bill of exceptions omitted in printing.

Reporter's certificate to foregoing transcript omitted in printing.

[fol. 408a] [File endorsement omitted.]

[fol. 408b] Clerk's certificate to foregoing bill of exceptions omitted in printing.

[fols. 409 & 410] IN THE SUPREME COURT OF THE UNITED STATES

STATEMENT OF POINTS TO BE RELIED UPON AND DESIGNATION OF THE PARTS OF THE RECORD TO BE PRINTED—Filed June 26, 1933

Come now the appellants (plaintiffs) and adopt their assignments of error as their statement of the points to be relied upon, and represent that the whole of the record, as filed, is necessary for the consideration of the case.

John C. Grover, Harold D. LeMar, Counsel for Appellants (Plaintiffs).

Service of copy of the above notice is hereby acknowledged this 21st day of June, 1933.

Charles W. Bryan, as Governor of the State of Nebraska; Dwight F. Felton, as Deputy Secretary of the Department of Agriculture of the State of Nebraska, by Paul F. Good, Attorney General, by Geo. W. Ayres, Counsel for Appellees (Defendants).

[fol. 411] [File endorsement omitted.]

Endorsed on cover: File No. 37,806. Nebraska Supreme Court. Term No. 203. P. F. Petersen Baking Company, Schulze Baking Company, Continental Baking Company, et al., appellants, vs. Charles W. Bryan, as Governor of the State of Nebraska, and Dwight F. Felton, as Deputy Secretary of the Department of Agriculture of the State of Nebraska. Filed June 26, 1933. File No. 203, O. T., 1933.